

GREATER TORONTO AREA 3Rs ANALYSIS
MUNICIPAL FINANCE TECHNICAL
APPENDIX

DRAFT - NOVEMBER 1993



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Prepared by Future Urban Research
for
Fiscal Planning and Information Management Branch
Ministry of Environment and Energy

DRAFT - NOVEMBER 1993



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1.0 INTRODUCTION

1.1 BACKGROUND

In 1989, the Government of Ontario announced its commitment to meeting a Provincial target of at least 50% reduction of waste going to landfills and incineration by the year 2000. This target, actually a waste diversion target (to be achieved through waste reduction, reuse and recycling -- the 3R's) was confirmed by the present Government in 1990.

To facilitate the achievement of the 50% target, the Province introduced the **Waste Management Act, 1992**. The Act broadens the government's powers to reduce waste sent to disposal through a variety of means. It also vests powers in the Interim Waste Authority (IWA), an agency created to complement 3R's activities, and to ease the waste disposal crisis in the Greater Toronto Area (GTA). The IWA is doing this by conducting environmental assessments to locate three long-term landfill sites in the GTA.

The GTA Regional Municipalities of Peel and Durham are each defined for the IWA as separate "primary service areas". Metropolitan Toronto and the Regional Municipality of York have been defined as a separate combined primary service area. Each of the three defined primary service areas is proposed to receive one new landfill facility through the IWA process. The fifth GTA Regional Municipality, Halton, has already obtained approval for a landfill site and thus is not part of the siting process.

1.2 PURPOSE OF THE STUDY

This study has two purposes, each of which relates directly to a requirement created by the **Waste Management Act**.

The first requirement pertains to waste estimates. The **Waste Management Act** (s.14) requires the Minister of the Environment and Energy to provide a written estimate as to:

- a) the amount of waste the would otherwise be expected to be generated in the primary service area (i.e. each of Peel, Durham and Metro/York) during

a twenty-year period that will not be generated because of waste reduction efforts; and

- b) the amount of waste that will be generated in the primary service area during a twenty-year period that will not need to be disposed of in the site because of the reuse or recycling of materials that are or could become waste.

Initial estimates of a) and b) above have been provided to the IWA by the Minister. The current study provides additional analysis of 3R's activities, in support of the waste diversion estimates previously provided.

The second requirement pertains to analyzing the 3R's as "alternatives to" landfill waste disposal sites. Section 15 of the **Waste Management Act** requires that the IWA environmental assessments contain a description of, and a statement of rationale and evaluation to the IWA for use in its environmental assessments. The present report fulfils this requirement.

1.3 STUDY APPROACH

The purpose of the GTA 3R's Analysis is to identify and evaluate alternative 3R's systems, comprised of combinations of 3R's programs, technologies and practices, that could reasonably be implemented in the GTA. It is also to determine the potential for each 3R's system to divert waste over the twenty-year minimum life expectancy of the GTA landfill sites and identifies the advantages and disadvantages of each system.

For the purpose of the present analysis, alternative 3R's systems have been identified for residential wastes, as well as for industrial, commercial and institutional (IC&I) wastes. For each system, estimates of the amount of waste the system could potentially divert from disposal have been determined. An evaluation, done on a non-site-specific, generic level and documented in this report, identifies the advantages and disadvantages to the environment of each potential 3R's system.

The results of this study will be used by the IWA in its environmental assessments, which will ultimately be submitted to the Ministry of Environment and Energy (MOEE) for review and approval. In conducting the 3R's work, and providing estimates of waste that will not require landfilling in the IWA established sites, MOEE is acting as a reliable authority in accordance with its legislative mandate, and not as the proponent or co-proponent of any of the 3R's systems discussed. The alternatives presented in this report are not in any way structured as detailed implementation plans for the Province, the Regions or the private sector.

1.4 PURPOSE OF THE MUNICIPAL FINANCE ASSESSMENT

This technical appendix details and documents the municipal finance component of the GTA 3R's analysis. Municipal finance effects are defined as the potential for changes to the financial resources and plans of the municipalities; the costs and capital expenditures, and other financial mechanisms and arrangements.

The primary purpose of this municipal finance assessment is to identify and assess the effects on the regional and local municipalities, and more specifically to the constituent taxpayers, which may occur as a result of the implementation of a 3R's system within each of the four regional municipalities (Metro Toronto, Peel, York and Durham). The results of this assessment are to serve as input into the overall 3R's systems evaluation.

The study objectives of the municipal finance assessment are as follows:

- * Identification of existing financial conditions within each of the regional municipalities.
- * Projection and quantification of municipal finance effects as a result of the implementation of any of the alternative 3R's systems within each of the regional municipalities.
- * Analysis of the potential municipal finance effects including the development of mitigation measures for the purposes of identifying net effects.
- * Identification of the highest ranked system in each of the regional municipalities from a municipal finance perspective.

1.5 OUTLINE OF REPORT

Chapter 2 presents the study approach used in the municipal finance assessment.

Chapter 3 provides a general description of the existing diversion activities, costs and financial mechanisms in the Regions of Halton, Durham, York, Peel and Metro Toronto including any Provincial and private funding present. It also details future waste diversion commitments in each of the Regions.

Chapter 4 provides a general description of the municipal finance conditions existing in the Regions of Halton, Durham, York, Peel and Metro Toronto.

Chapter 5 details the results of the assessment of the alternative 3R's systems from a municipal finance perspective.

2.0 APPROACH

2.1 METHOD AND TECHNIQUES OF ANALYSIS

The Ministry of the Environment and Energy (MOEE) has identified several key study components. These include:

- * A description of the existing situation for solid waste generation, diversion and disposal in the GTA (the Base Case);
- * Criteria needed for evaluating alternative diversion scenarios;
- * The effects of the current, or Status Quo ("Do-Nothing-More"), alternative to future waste diversion;
- * Future 3R's alternative systems;
- * Evaluation of net environmental effects of alternatives;
- * Waste diversion estimates for IWA use.

To address the municipal finance component, a similar project flow has been used to evaluate the alternative waste diversion systems. The following steps have been identified as necessary municipal finance study components:

- * establish the base case situation by examining the existing financial situation in each of the GTA Region's and local municipalities;
- * quantify the future plans and financial resources intended to be committed to waste diversion in each municipality;
- * include other future costs and capital expenditures that are priority items in these municipalities;
- * test the financial ability of the GTA municipalities to participate in the 3R's alternative systems;
- * isolate the full extent of financial commitment that the municipalities may be able to commit to further waste diversion;
- * estimate the effect of each of the alternative diversion systems on the municipal finance structure.

To establish the existing situation and to determine future trends for analytical purposes, information gathered for each municipality included:

- * Operating Budgets
- * Capital Budgets with Multi-Year Forecasts
- * Property Assessment Valuations
- * Property Assessment Growth Trends
- * Revenue Sources and Profiles
- * General Tax Levy Details
- * Household Property Tax Levels
- * Operating Expenditure Profiles
- * Waste Collection, Disposal and Diversion Expenditure Details
- * Debt and Debenture Levels
- * Debt Capacity and Allowable Borrowing Ratios
- * Reserve Fund Positions

This information was augmented through personal interviews with finance officials and other relevant staff in most of the municipalities. The discussions included future trends, priorities, expenditures, etc. for waste diversion and other municipal services. (A complete list of persons interviewed is contained in Schedule G of this report.)

2.2 ALTERNATIVE SYSTEM ANALYSIS

As described above, the study process first established the base case financial profile for each of the GTA Regions and local area municipalities. The process of pre-screening and evaluation of each of the alternative diversion systems consisted of adding the associated costs and revenues for each diversion option to the base financial profiles. The level of magnitude resulting from the analysis of the alternative system suggests the degree of impact that the option may have on the sponsor municipalities.

At the time that this report was prepared, municipal financial statements and, specifically, the Financial Information Returns for 1992 were not yet completed. Therefore, the Province's MARS (Municipal Archive Retrieval System) data base was used as the principal data source to compile municipal financial profiles. Moreover, 1990 represented the most complete and verified year for data accumulation.

However, it was determined that it was important for the analysis to be as current as possible. Since the inception of recycling and other diversion activities in the GTA municipalities in the late 1980's, significant advances and considerable effort in resources and budget dollars have been made. As a result, it was determined that financial information relating to waste diversion activities in the GTA municipalities should at least represent 1992 data.

Since a profile founded on 1990 data cannot capture the recent efforts in recycling and waste diversion over the last two years, the base year data was adjusted for analytical

purposes. To bring the financial information for waste diversion up to date, the base year's data was adjusted to reflect the most recent activities occurring in waste diversion. To do this, the 1992 Current Operating Budgets for each of the GTA Regions and area municipalities for waste diversion were added to the base 1990 financial information (net of 1990 waste diversion activities). This, therefore, allowed for a current comparison of alternative diversion systems. More importantly, this process did not exaggerate the effect of future diversion alternatives on old 1990 levels of service, but instead, uses the more current levels of service now being offered in the GTA municipalities. Prior to the finalization of this report, the base data will be up-dated to reflect the most recent information possible.

2.3 DATA USED IN THE ANALYSIS

As indicated, the principal source of information for the base financial profiles was the Province's MARS (Municipal Archive Retrieval System) data base for 1990. This system includes data from the Financial Information Return which is mandatory information submitted by all municipalities in Ontario.

In addition, to the MARS information, the following list provides the information compiled for each Region and area municipality:

- * Current Budget Summaries for municipal operations for 1990, 1991, 1992 and 1993 where possible
- * Capital Budget Summaries and Four Year Forecasts for 1990, 1991, 1992 and 1993 where possible
- * Detailed Current Budgets for waste diversion activities for 1990, 1991, 1992 and 1993 where possible
- * Detailed Capital Budgets and Four Year Forecasts for diversion activities for 1990, 1991, 1992 and 1993 where possible
- * The most recent Financial Information Return
- * The Development Charges Background Study Report if it contained a waste or waste diversion component
- * Other relevant waste diversion reports if applicable

In addition to this information, data was also obtained from the other consultant team members. Specifically, demographic and economic information was obtained from Hardy Stevenson and Associates and waste diversion logistics and volume information was obtained from Resource Integration Systems Limited. Further, the actual alternative system options were obtained from Resource Integration Systems Limited.

Each technical appendix for the other study components were prepared, reviewed and revised concurrently. As a result, some revised information contained in the technical appendices reporting on alternative system cost and service (tonnage and diversion rates) is not wholly incorporated into this document. These revisions mostly represent minor differences in figures and should not significantly affect the result of this analysis. These revised information items will be incorporated into this municipal finance technical appendix when it is finalized after the public consultation stage of the EA process.

2.4 MAJOR ASSUMPTIONS USED IN THE ANALYSIS

The analysis implicitly deals with a long planning horizon. While the IWA landfill facilities may be in place by 1996 or 1997, the waste diversion alternatives examined in this report may not be implemented within the same time period. In fact, for some system alternatives, a fully operational option may not be possible until later in the 1990's. As a result, estimating the financial effects of these future programs over such a long time frame becomes subject to a large number of exogenous variables. That is, external factors that are largely beyond the control of the analysis itself and could change in the future.

If any or all of these factors change significantly, the results of the analysis could similarly change. As time progresses, gauging the amount of change will primarily become a question of the magnitude. Based on this, the analysis may have to be revised or updated in the future.

This analysis, while based on the most recent information available, has several implicit assumptions. These assumptions relate to: economic conditions (inflation, borrowing costs, commercial and industrial growth, etc.); demographic growth; normal Provincial operating grants; and, the growth and consistency of municipal expenditures and revenue profiles. Two implicit assumptions, however, require further comment.

1. It will be demonstrated in the following chapter of this report that the financing arrangements between waste disposal and waste diversion in the GTA can become quite inter-dependant. For example, in Peel Region excess tipping fee revenue is used to offset waste diversion costs. Similarly in York Region, while a small recycling processing fee has now been adopted, several of the other diversion programs are funded, via reserve funds, which stem from the royalties received from Metro Toronto.

This analysis assumes that the current financing arrangement will continue in the future, if and when the IWA site becomes operable.

Further, this suggests:

- a) some other agency, such as the IWA, may continue royalty payments in amounts sufficient to fund current programs and therefore only the net cost of alternative systems examined in this report would have a financial effect on the rate payers in the municipality; or
 - b) in the absence of external funding, overall costs to the rate payers may rise, but this is not a result of alternative waste diversion systems being advanced. Instead, only the net cost of the diversion alternative need be examined because other costs are the result of structural changes within, or upon, the municipality.
2. Waste diversion is handled quite differently from one Region to the next. For example, Durham Region is responsible for both collection and processing of recyclable material. In the Region of York, however, the lower tier is responsible for collection and, as of April, 1993, all material will be brought to the Regional processing centre.

In actuality, these arrangements may not continue in the future. Changes to the structure are now occurring in Metro Toronto. Similar to the reasoning used above, overall costs to the ratepayers may rise due to structural or cost sharing changes, but again, this is not a result of alternative waste diversion systems being advanced in this report.

2.5 IMPACT CRITERIA

A formal procedure was used to evaluate the alternative systems. Future Urban Research utilized criteria and indicators to assess the systems by identifying the financial elements that would most likely be affected by changes to the municipal financial structure. The following represents the criteria and indicators used in the Municipal Finance component.

| | |
|--------------------|--|
| Criteria: | Potential Impact on Local Taxpayers |
| Indicators: | Total Increase in Net General Municipal Levy Net General Municipal Levy, adjusted for commercial/industrial property assessment, expressed on a per household basis |
| Rationale: | To avoid unnecessary or burdensome costs to the local residents, the criterion focuses on determining cost effective system alternatives that minimize taxes and local charges. Further, it addresses the goal of minimizing impacts on human communities. |

Criteria: Potential Impact on Municipal Reserve Funds

Indicators: Total Amount of Reserve Funds

Reserves per Household

Reserves as a Percentage of Operating Expenditures

Rationale: Internal financing strategies to avoid debt or taxes decreases the effectiveness of reserve fund financing for other municipal priorities and reduces the municipality's ability to offset unexpected budget expenditures. Further, it addresses the goal of minimizing impacts on communities.

Criteria: Potential for Impact on the Level of Municipal Service

Indicators: Total Municipal Wages, Salaries, Materials & Contract Expenditures per Household

Current Expenditures by Department per Household

Rationale: Paying the same for less service is the same as a cost increase. To avoid an unnecessary debt burden to the local residents and allow for other local capital spending priorities, the criteria focuses on determining cost effective system alternatives that minimize debt burden. Further, it addresses the goal of minimizing impacts on human communities.

Criteria: Potential for Impact on the Provincial Treasury

Indicators: Amount of Provincial Funding

Rationale: To completely capture the potential effect of system alternatives on the people of Ontario and to avoid an unnecessary or burdensome cost to either the local municipalities, or the private sector, the criteria focuses on determining cost effective alternatives in terms of Provincial mitigation. Further, it addresses the goal of minimizing impacts on human communities.

During the course of this study, however, it was found that reliance on this criteria had to be lessened. Due to budget and social contract considerations, the amount of grant funding beyond the current Provincial fiscal year is uncertain. In the extreme, the Province may find it necessary to address the funding assistance of each 3R's alternative examined in this study on a case-by-case basis. Due to this, evaluations under this criteria became indeterminate. Actual resolution may possibly depend on actual funding negotiations with each Region.

Criteria: Potential for Impact on Private Sector Industries

Indicators: Amount of Private Sector Funding

Amount of Private Sector Costs

Amount of Costs Passed on Through Higher Prices

Amount of Private Sector Costs Financed Through Taxes, Incentives, Economies etc.

Rationale: To avoid unnecessary or burdensome costs being passed on to the

private sector from the public sector, the criteria focuses on capturing the potential social effects on consumers while determining the system alternative cost on private sector industries within the GTA.

Criteria: Potential for Impact on the Debt Burden on the Municipality

Indicators: Amount of Debenture Debt

Annual Debt Payments as a Percentage of Expenditures

Available Debt Capacity (former OMB/MMA guideline)

Rationale: To avoid an unnecessary debt burden to local residents and allow for other local capital spending practices, the criteria focuses on determining cost effective system alternatives that minimize debt burdens. This in turn also minimizes future taxes and local changes to be paid by residents. Further, it addresses the goal of minimizing impacts on human communities.

Comparing waste diversion activities from one Region to the next shows very different ways of organizing and financing municipal operations. Therefore, prior to describing the base financial profiles of the GTA municipalities, the waste diversion activities in each of the Regions have been outlined in the following chapter. This chapter includes the total cost of diversion activities in the GTA. The financial profiles for each municipality are presented in Chapter 4 of this report.

3.0 EXISTING CONDITIONS

In most all municipalities in Ontario, the 1993 budget approval process was highlighted by fiscal restraint. In the GTA municipalities, considerable efforts were placed on keeping budgets at prior year levels, if not lower. For these reasons, the cost of waste diversion and the Blue Box program received significant attention.

Due to the fiscal importance of waste diversion, this chapter first describes the financial mechanisms used by each of the GTA Regions to finance diversion operations. This description shows that each Region finances diversion programs differently. Notwithstanding these differences, however, portions of the cost of diversion in each Region must be ultimately borne by local residents. The costs borne by local residents are also summarized in this chapter.

The chapter then describes future financial trends in the GTA along with future waste diversion commitments. With this base, the report then examines the effects of the future waste commitments in terms of the criteria and indicators previously designed to isolate financial effects.

While the following focuses on the Regions directly affected by the I.W.A. landfill sites, the Region of Halton is also included in this comparative analysis as it is also a GTA region that undertakes significant waste diversion activities. By including Halton Region in this comparison, a complete picture of the various 3R's activities in the GTA can be obtained and the differing costs and funding mechanisms can also be shown. In this way, a complete picture of 3R's activity in the GTA can be presented.

3.1 ANALYSIS OF EXISTING SYSTEM

3.1.1 Financial Mechanisms

On an operational level, the upper tier Regions in the GTA have jurisdiction over waste diversion processing, while the local municipalities are largely responsible for Blue Box

collection. In financial terms, however, the mechanism in each Region can become quite tangled and, in most cases, the upper tier assumes full financial responsibility for diversion activities. This structure, though, has been challenged recently. For example, at present North York and Metropolitan Toronto disagree on specific jurisdictional roles. Moreover, due to the lack of funds, the financial mechanism in Metro may change in the near future. Also, the relationship in Peel may be revised in the near future. The dynamics of the financial situation underscore the need for a description of the relationships involved.

Durham Region

Figure 1 shows that financial responsibility in terms of funding 3R's in Durham remains the responsibility of the Region. That is, while the area municipalities undertake all Blue Box collections, Durham Region reimburses each via its Waste Management Reserve. To this end, payments to the area municipalities in 1992 approached \$1.7 million. In terms of processing, the Region also assumes full financial responsibility. A tipping fee of \$105.00 per tonne was charged in 1992 to each municipality for recyclable materials delivered to the Durham Recycling Centre. The tipping fee, however, does not necessarily cover the total costs of collecting and processing recyclable materials. Operating shortfalls are financed through the Waste Management Reserve and in 1992 this contribution totalled \$5,147,800. Due to this sizable amount, during its budget deliberations Durham Regional staff were considering establishing a fully self-sufficient recycling tipping fees that would finance all diversion costs. If fully costed, this tipping fee would approach \$250.00 per tonne.

Since Regional Council adopted the 1993 Durham budget, Metropolitan Toronto revised its waste disposal fee that is charged to Durham Region (and subject to rebate) from \$152.00 per tonne to \$90.00 per tonne. As a result of this action, Durham Region is now considering reducing its recycling processing fee from \$105.00 per tonne to \$75.00 per tonne.

Metropolitan Toronto

For the last five years, the financial responsibility for the transfer and collection of diversion material remained with Metro, while the processing of recyclable material is directly a Metro responsibility. In the past few years, the local municipalities undertook the collection of Blue Box material and the Cities of North York, Scarborough and Etobicoke operated their own composting and transfer facilities. Moreover, Metro compensated the local municipalities for their collection costs. Metro similarly offset the three municipalities for the costs of the composting centres through a diversion credit system (at \$26.50 per tonne for leaves and \$35.00 per tonne for yard waste). That is, the municipalities were paid according to the volumes processed. (During this same time, the City of Toronto did not take part in the direct Blue Box collection compensation program, but rather operated on a diversion credit system.) The funds for the diversion credits and Blue Box collection were drawn from the private sector tipping fees at the Keele Valley and Brock Road landfill sites, via Metro's Waste Management Reserve.

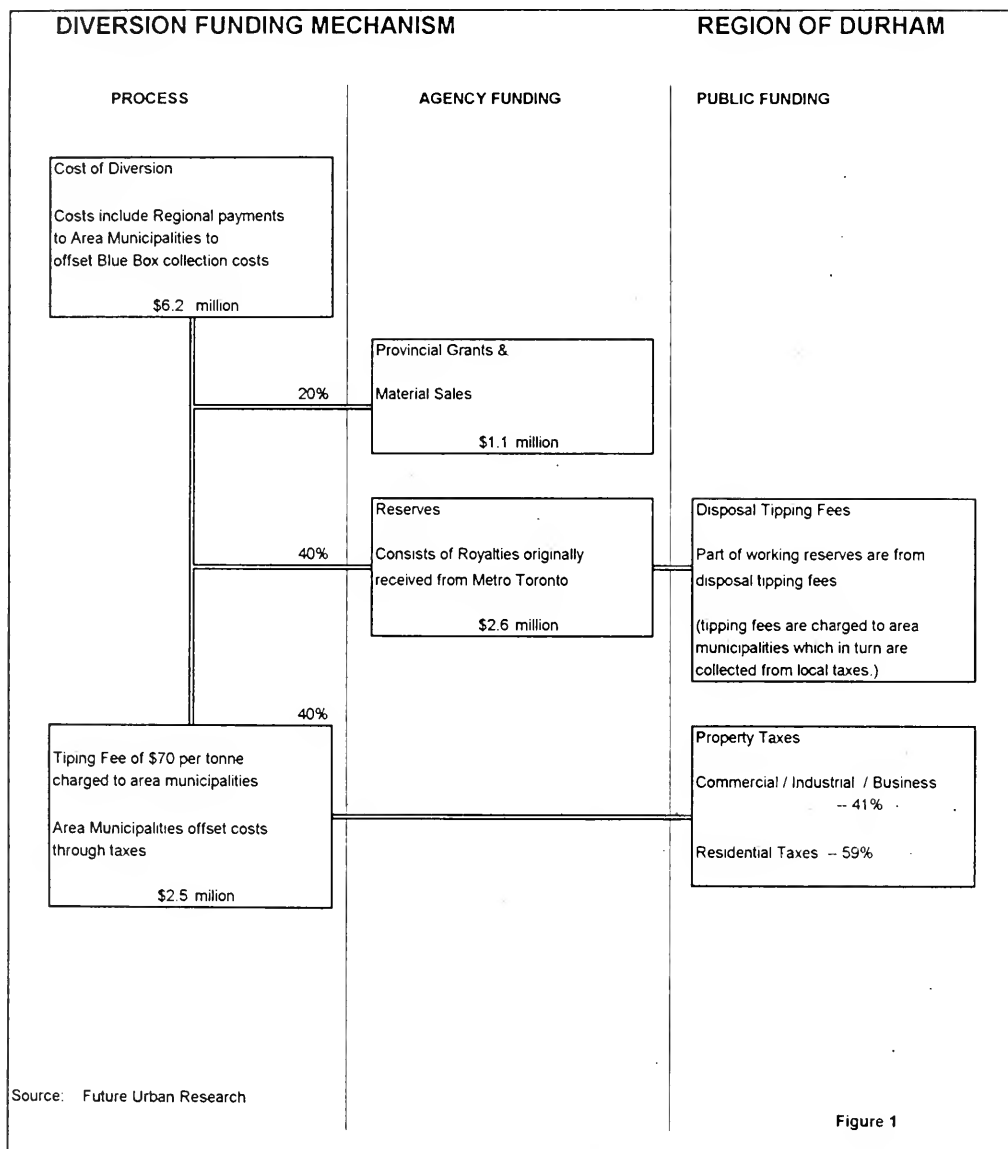
York Region

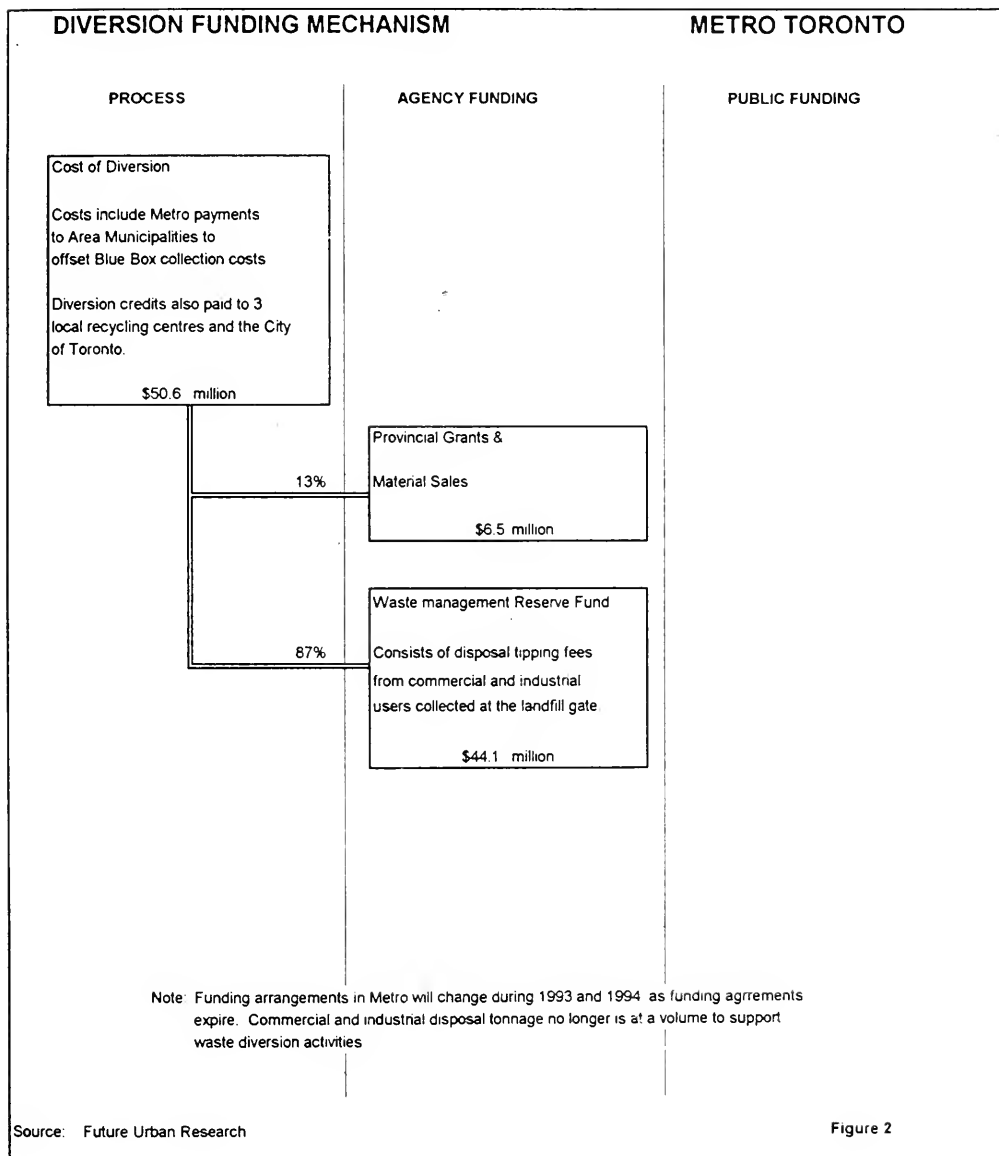
The financial responsibility for funding 3R's is slightly different in each of the nine area municipalities due to the fact that each municipality offers slightly different 3R's programs and facilities. However, for the most part in York Region, the area municipalities assume financial responsibility for collection which is funded through the local municipal levy. In 1992, the area municipalities also assumed financial responsibility for diversion processing. The costs for processing were based on a cost sharing approach. Each municipality was assessed the gross cost of processing less the revenues received from sale of materials. The costs were allocated to each municipality based on population, and not actual tonnage. This net cost was financed through municipal taxes. It should be noted that, in 1992, the Region of York assumed financial responsibility for the household hazardous waste and the organic yard waste programs. A tipping fee was charged for both programs, but it does not cover the operating costs of the programs. As a result, the shortfall was funded by the Regional Waste Management Reserve Fund. This fund consisted mainly of royalty revenue received from Metropolitan Toronto for the Keele Valley Landfill site.

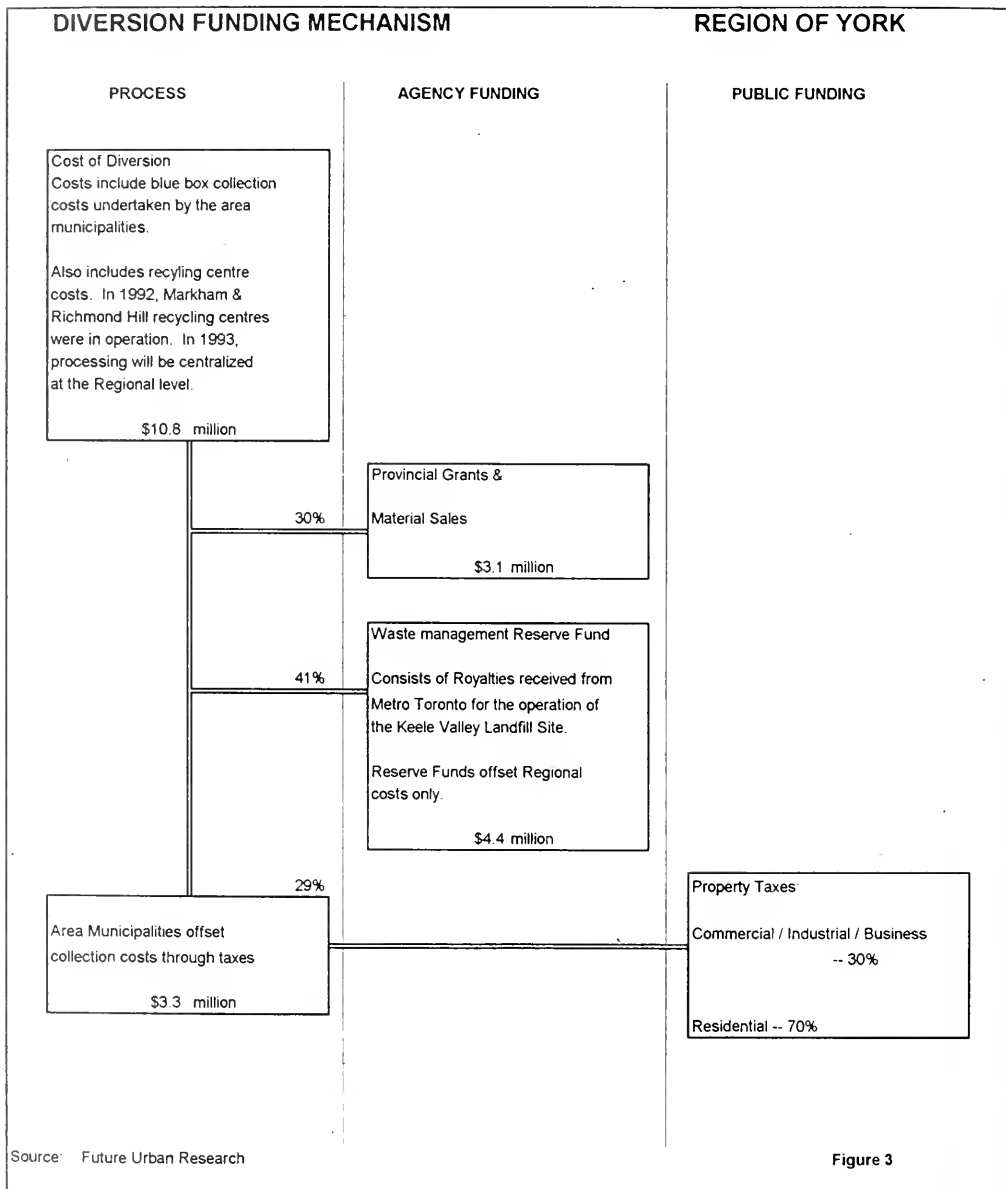
Peel Region

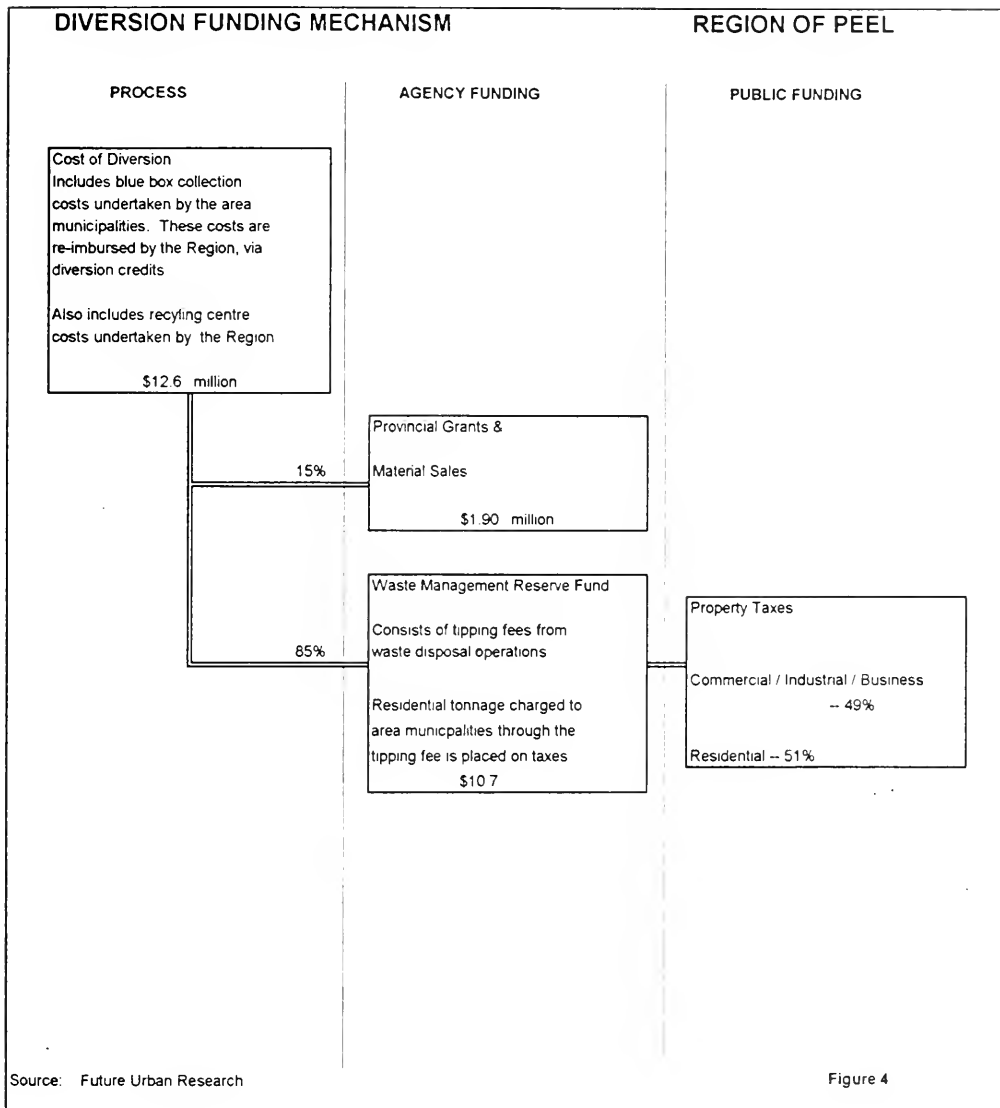
Since January, 1991 financial responsibility in terms of funding 3R's has been a Regional responsibility. The Region assumes financial responsibility for collection and processing which is funded through the reserve which was accumulated from the tipping fee charged for landfill waste (since 1978). The Region funds the net collection and processing costs, that is, the cost after any revenues received from the sale of recyclable materials and grants. This is shown on Figure 4.

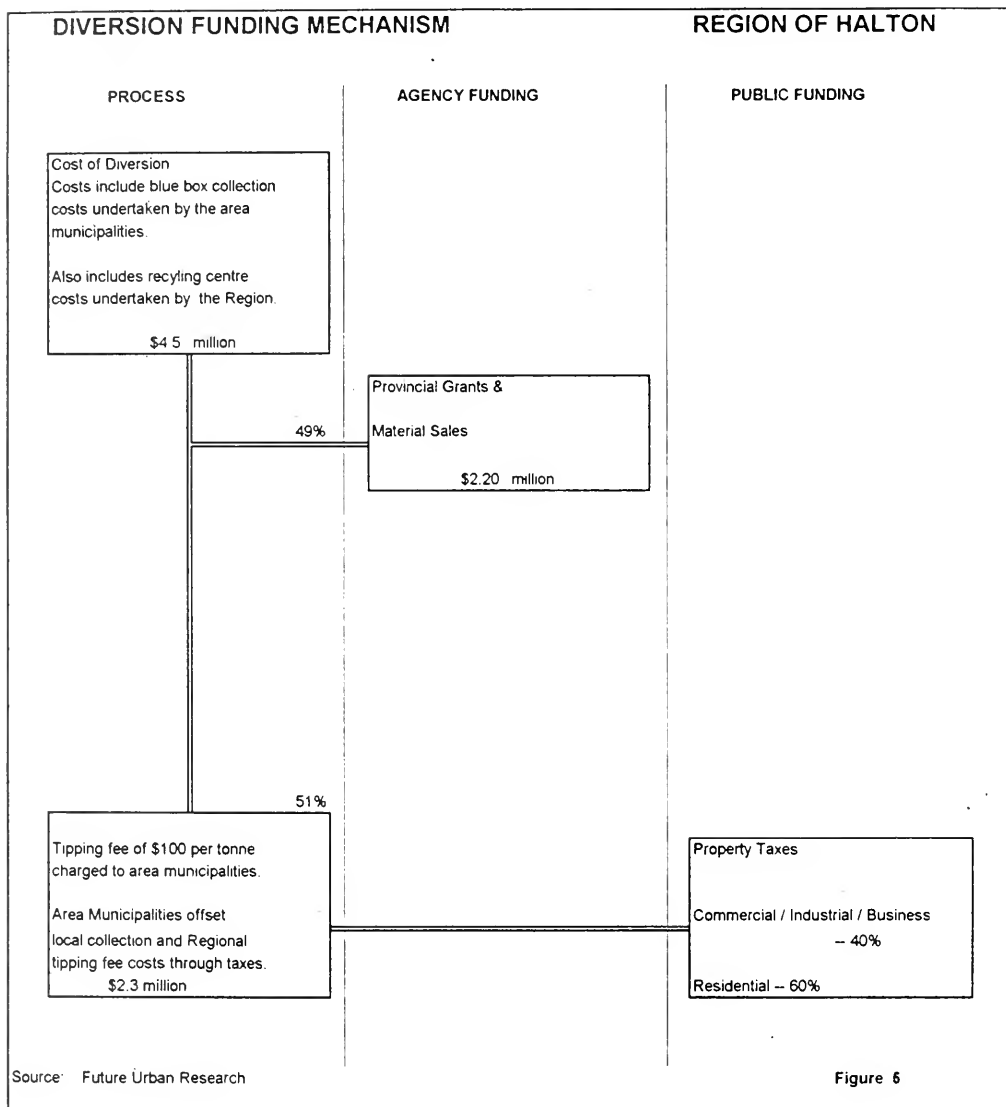
The administration of the 3R's programs in Peel Region is handled by the three area municipalities. These municipalities arrange the physical collection and processing of recyclable materials. All three area municipalities are responsible for, and actively participate in, the residential Blue Box program (although the type of material accepted varies). The area municipalities have also expanded their residential program to include "special" residential wastes. Materials collected from each municipal special residential collection program include leaves, Christmas trees, brush and phone books. In addition to the residential Blue Box program, Caledon implemented a town wide user pay recycling system for its industrial and commercial sectors in late 1991. With the exception of Bolton, collection of recyclables is incorporated into Caledon's regular residential collection system.











Halton Region

Financial responsibility in terms of funding 3R's is entangled, and slightly different in each of the four area municipalities due to the fact that each municipality offers slightly different 3R's programs and facilities. However, for the most part, in Halton, the Region assumes financial responsibility for Blue Box collection which is funded through the Regional levy. In terms of processing, the Region also assumes financial responsibility. A tipping fee of \$100.00 per tonne is charged to each municipality for recyclable materials delivered to the Halton MRF. The tipping fee charged does not necessarily cover the total costs of administering and collecting recyclable materials. The tipping fee charged to each municipality is subsequently financed through local property taxes. This is shown on Figure 5.

3.2 THE COST OF DIVERSION ACTIVITIES IN THE GTA

Table 3-1 summarizes waste diversion costs in the GTA. It is compiled from 1992 operating budgets of all relevant municipalities, grouped by Regions, and includes both collection at the local level and processing operations at the Regional level. A complete municipal breakdown is shown in Schedule B.

The purpose of this table is to demonstrate the net cost of diversion activities in each of the GTA Regions on the tax payers within the Regions. The table therefore excludes the various financing sources that Regions may use to offset costs, such as, tipping fees or reserve fund financing. This is presented in this manner because regardless of internal (local) financing, all charges ultimately are borne by the local taxpayer, after outside funding sources are taken into account. Therefore, this table takes items into account such as, material sales and Provincial funding sources, but excludes any internal financing, diversion credits, etc. As such, the summary is similar to the details of the financing mechanisms shown in Figures 1 through 5.

Table 3-1 is also subject to the different reporting practices in each of the GTA municipalities. For example, while some municipalities report overhead items such as vehicle or property insurance, gasoline, depot costs, etc., as administrative items; others pro-rate these types of costs directly against the collection or processing function. Also, Table 3-1 reflects the amount of commercial, industrial and business taxes paid at the local level so that a clear determination could be made of the remaining net household costs.

| GTA 3R ANALYSIS TOTAL WASTE DIVERSION COSTS (1992 Budget) | | | | | | Table 3-1 | | |
|---|---------------|-----------------|-------------|----------------------------------|----------------------|-------------------------|---------|---|
| (in dollars) | Gross Cost | Rev & Grants | Net Cost | Residential Share of Taxes | Residential Costs | 1991 House- holds | Tonnage | Residential Cost Per Household Net |
| Halton Region Total Costs | 4,463,300 | 2,200,000 | 2,263,300 | 60% | 1,357,980 | 106,420 | 27,000 | 13 |
| Durham Region Total Costs | 6,190,420 | 1,139,100 | 5,051,320 | 59% | 2,980,279 | 136,135 | 38,805 | 22 |
| York Region Total Costs | 10,848,341 | 3,077,640 | 7,770,701 | 70% | 5,439,491 | 150,485 | 56,454 | 36 |
| Peel Region Total Costs | 12,622,910 | 1,955,000 | 10,667,910 | 51% | 5,440,634 | 229,670 | 60,559 | 24 |
| Metro Toronto Total Costs | 50,687,042 | 6,452,300 | 44,234,742 | 48% | 21,232,676 | 864,555 | 209,682 | 25 |
| Total GTA | 84,812,013 | 14,824,040 | 69,987,973 | 52% | 36,451,060 | 1,487,265 | 392,500 | 25 |
| Total GTA Excl Metr | 34,124,971 | 8,371,740 | 25,753,231 | 59% | 15,218,384 | 622,710 | 182,818 | 24 |
| Source: 1992 Current Operating Municipal Budgets | | | | | | | | |

In total, waste diversion efforts in 1992 cost \$84,812,013 million when the whole GTA is taken together. While costs in Metro approached \$50,687,042 million, diversion costs approached \$34,124,971 in the rest of the GTA Regions. This included: Peel Region - \$12,622,910 million, York Region - \$10,848,341 million, Durham Region - \$6,190,420 million and Halton Region - \$4,463,300 million.

After material sales and MOEE funding of \$14,824,040 million are considered, net operating costs approached \$69,987,973 million. While net costs in Metro totaled \$44,234,742 million, net costs for the rest of the GTA Regions total \$25,753,231 million. This is comprised of: Peel Region - \$10,667,910 million, York Region - \$7,770,701 million, Durham Region - \$5,051,320 million and Halton Region \$2,263,300 million.

In 1992, total tonnage processed in the GTA approached 392,500 tonnes, with 209,682 processed within Metro and 182,818 processed in the rest of the GTA Regions. As a result, Table 3-1 also presents diversion costs on a household basis. To determine the household cost of diversion, a non-residential share of net costs was excluded from the calculations. This was done to reflect the fact that the a portion of local taxes is paid by the commercial/industrial sector. Throughout the GTA, net diversion costs in 1992 averaged \$25.00 per household. This amount ranged from \$25 per household in Metro to \$24 per household in the rest of the GTA. Regionally, household costs were: Peel - \$24 per household, York - \$36 per household, Durham - \$22 per household and Halton \$13 per household.

Table 3-2 shows the individual per household costs for waste diversion as compared to the household municipal tax levels (excluding schools). It is pointed out that not all of these costs are directly funded by the individual tax levies. In some Regions these costs are either funded by tipping fees and/or reserve fund contributions. This table demonstrates, however, the relative magnitudes of net waste diversion costs as compared to municipal taxation. (Municipal taxation figures are detailed in Chapter 4 of this report entitled Municipal Finance Profiles.)

It can also be shown that household cost figures for each Region for total waste management (disposal and diversion) used by Resource Integration Systems Ltd., in their technical appendices, can be reconciled with the figures presented here. A complete reconciliation is presented in Schedule E to this report and includes items such as, overhead costs and commercial property tax contributions.

Table 3-2

**Per Household Waste Diversion Costs
Compared to Municipal Taxation
(Excluding School Levies)**

| | Taxation | Cost of Diversion | Percent |
|---------------|-----------------|------------------------------|----------------|
| Durham Region | \$1,032 | \$22 | 2.1% |
| Metro Toronto | 1,015 | 25 | 2.5% |
| York Region | 1,041 | 36 | 3.5% |
| Peel Region | 942 | 24 | 2.5% |
| Halton Region | 1,059 | 13 | 1.2% |

Source: Future Urban Research

3.3 WASTE DIVERSION IN THE GTA

Each of the five regional municipalities in the Greater Toronto Area are actively engaged in waste diversion activities to help achieve Provincial waste diversion targets. The following section describes waste diversion programs/facilities currently in place within the GTA. In addition, due to the fact that waste diversion costs are directly affected by landfill tipping fees or avoided disposal costs, our analysis has included a review of the current landfill waste programs/facilities within the GTA.

Historically, waste disposal services were available at cost while recycling activities were determined primarily by prices paid for secondary materials, collection and processing costs. However, waste management (disposal and diversion) is now entangled. The tipping fees charged for landfill disposal are not cost based but are set as deterrent prices or for revenue generation purposes designed to help fund recycling activities. For example, in Peel, municipal recycling is funded through the Regional Working Fund

Reserve, which has accumulated from the excess of the landfill tipping fee charged, over the cost to dispose. Further, in Halton Region it is estimated that in 1993 approximately \$53.00 of its landfill disposal tipping fee will finance 3R's programs.

3.3.1 The Regional Municipality of Durham

The Region of Durham has implemented the following programs/facilities to divert waste from landfill:

- * bi-weekly Blue Box recycling program;
- * Igloo program that services both rural and high traffic urban public areas;
- * household hazardous waste (HHW) programs including drop offs operated by Metro at various transfer stations;
- * residential backyard composting program;
- * waste reduction education program including display and promotional materials;
- * residential leaf and yard waste collection and composting programs;
- * reuse and donation centres located at the landfill sites and Regional transfer stations;
- * depots for white goods etc. and container stations situated throughout the Region;
- * Durham Recycling Centre(MRF) owned and operated by the Region.

In 1992, 141,896 tonnes of residential waste were generated. Of this, 38,805 tonnes were diverted from landfill and 103,091 were disposed, equating to a diversion rate of approximately 27% for residential waste. A similar volume of waste disposal has been forecast for 1993, since the Region is not planning to establish new diversion programs or up-grade existing programs or service coverage, to the level whereby diversion rates would be affected materially.

Collection and Processing of Recyclable Materials

Financial responsibility in terms of funding 3R's remains the responsibility of the Region. That is, while the area municipalities undertake all Blue Box collections, Durham Region reimburses each via its Waste Management Reserve. To this end, payments to the area municipalities in 1992 approached \$1.7 million. In terms of processing, the Region also assumes full financial responsibility. A tipping fee of \$110.00 per tonne was charged in 1992 to each municipality for recyclable materials delivered to the Durham Recycling Centre. The tipping fee, however, does not necessarily cover the total costs of collecting and processing recyclable materials. Operating shortfalls are financed through the Waste Management Reserve and tipping fees charged to the municipalities, and in 1992 this

contribution totalled \$5,147,800. Due to this sizable amount, Durham Region is now considering establishing a fully self-sufficient recycling tipping fee that would finance all diversion costs. If adopted this tipping fee would approach \$250.00 per tonne.

The transfer stations located in Oshawa, Cartwright and Scugog also play an important role as recycling stations. Residents drop off recyclable materials at the transfer stations where they are sorted and transported to the Durham Recycling Centre.

Financing Waste Diversion Facilities/Programs

The operating expenditures for the existing 3R's facilities/programs include expenses for the following: overhead, facilities management, recycling materials facility, recycling contract operations, Igloo program, recycling vehicles, HHW programs, debt charges and administration. In 1992 total expenditures were \$6,190,420 with the recycling collection representing approximately 29% or 1,767,600 and processing operations representing approximately \$3,954,200 or 64% of the total cost. Overhead represented the remaining 7% of the total cost or \$468,620.

Also in 1992, revenues totalled \$1,139,100. This included \$596,000 in MOEE funding and \$543,100 in material sales.

On the basis of the above costs and revenues, the net cost to provide 3R's facilities and programs in 1992 for Durham Region approached \$5,051,320.

Collection, Disposal and Financing of Landfill Waste

The Region of Durham principally makes use of Metro's Brock landfill located in Pickering (within Durham), while a smaller site is still maintained in Brock Township. The Brock site accepts waste only from Brock Township, and is scheduled to close in approximately six years.

The individual area municipalities are responsible for the physical collection and disposal of landfill waste. The Region is charged a tipping fee (\$152.25 per tonne) at the Metro owned landfill site, and they receive an offsetting rebate (\$83.86 per tonne) from Metro for residential (normal municipal) waste. Durham Region itself recaptures its net disposal costs through a tipping fee charged to the area municipalities. In 1992 this tipping fee was \$52.00 per tonne and Durham expects to increase this to \$59.00 per tonne in 1993.

3.3.2 Metropolitan Toronto

Metropolitan Toronto has implemented the following programs/facilities to divert waste from landfill:

- * weekly Blue Box recycling program;
- * Igloo program that services both rural and high traffic urban public areas;
- * 10 household hazardous waste (HHW) depots and programs and two toxic taxis operated by Metro;
- * residential backyard composting program;
- * residential leaf and yard waste sites (6) and collection and composting programs;
- * waste reduction education program including display and promotional materials;
- * transfer stations that have bins specifically for cardboard, scrap metals, and recyclables;
- * 3 composting facilities and recycling depots in Scarborough, North York and Etobicoke operated by the local municipalities.
- * donation centres and stores for donated clothing and small items;
- * reuse activities and centres;
- * 3 material recycling facilities, 2 of which are located in Toronto and the third is located in Downsview;
- * curbside collection of white goods in East York, Etobicoke and York.

In 1992, 1,078,295 tonnes of residential waste was generated. Of this, 209,682 tonnes, was diverted from landfill and 868,613 tonnes were disposed equating to a diversion rate of approximately 19%. While it is expected that disposal volumes may increase in 1993 because Metro is considering reducing its disposal tipping fee, similar diversion volume has been forecast for 1993. This is primarily due to the fact that Metro will be phasing out its program of reimbursing the local municipalities' Blue Box collection costs.

Collection and Processing of Recyclable Materials

For the last five years, the financial responsibility for the transfer and collection of diversion material remained with Metro. Further, the processing of recyclable material is directly a Metro responsibility. In the past few years, the local municipalities undertook the collection of Blue Box material and the Cities of North York, Scarborough and Etobicoke operated their own composting and transfer facilities. Moreover, Metro compensated the local municipalities for their collection costs. Metro similarly offset the three municipalities for the costs of the composting centres through a diversion credit system (at \$26.50 per tonne for leaves and \$35.00 per tonne for yard waste). That is, the municipalities were paid according to the volumes processed. (During this same time, the City of Toronto did not take part in the direct Blue Box collection compensation program, but rather operated

on a diversion credit system.) The funds for the diversion credits and Blue Box collection were drawn from the private sector tipping fees at the Keele Valley and Brock Road landfill sites, via Metro's Waste Management Reserve.

Financing Waste Diversion Facilities/Programs

The operating expenditures for the existing 3R's facilities/programs include expenses for the following: Blue Box collection, recycling materials facilities, recycling operations, Igloo program, recycling vehicles, HHW programs, debt charges and administration. In 1992 total expenditures were \$50,687,042 million with the recycling collection operations representing \$31,781,492 million or 63% and process operations representing approximately \$16,909,200 million, or 33% of the total cost. In the same year, administrative and overhead costs approached \$1,996,350 million or 4% of total cost.

Also in 1992, revenues totalled \$6,452,300, million. This included \$4,232,500 million in MOEE funding and \$2,219,800 million in material sales. On the basis of the above costs and revenues, the net cost to provide 3R's facilities and programs in 1992 for Metro Toronto approached \$44,234,742.

Collection, Disposal and Financing of Landfill Waste

Landfill waste management facilities and programs include: Keele Valley landfill site and the Brock West Landfill site located in Pickering within Durham. Approximately 70% of Metro's waste is disposed at the Keele Valley landfill site, and the remainder is disposed at the Brock west landfill site.

At the present time, waste collection is an area municipality responsibility. The 1992 tipping fee for Metro landfills was \$152.00 per tonne. If loads contained any recyclables, a higher rate of \$300.00/tonne was charged. Tipping fees for 1993 have now been reduced to \$90.00 per tonne and this became effective May 1, 1993.

3.3.3 The Regional Municipality of York

The Region of York is the only regional government within the GTA which does not co-ordinate the recycling programs of its member municipalities. Each municipality is solely responsible for the implementation and operation of its own curbside recycling program. For ease of presentation we have presented the diversion programs/activities that are taking place within York Region below.

- * residential Blue Box program;
- * special collection or depot services for goods that are particular to season or size including leaves, Christmas trees, brush and white goods;

- * household hazardous waste program including mobile depots and special collection days;
- * composting facility and provision of residential backyard composting bins;
- * two material recycling facilities scheduled to close and a Regional facility will open;
- * residential leaf and yard waste collection and composting programs;
- * reuse activities run by social organizations such as Goodwill;
- * promotional/educational programs;

In 1992, 198,604 tonnes of residential waste was generated. Of this 56,454 tonnes was diverted from landfill and 142,150 tonnes was landfilled, equating to a diversion rate of approximately 38%. A modest decline from the 1992 volume of waste disposal has been forecast for 1993. However, it should be noted that the volume of waste for disposal has been declining at a steady rate since 1991 primarily as a result of IC&I (Industrial, Commercial and Institutional) waste being transported by private haulers out of the Region to alternate lower cost disposal sites. The budgeted volume of recyclable materials for 1993 is anticipated to be similar to 1992 levels tonnes. This does indicate the need to ultimately adopt alternative methods of waste reduction to realize the provincial mandate of 50% waste diversion by the year 2000. The Region has indicated that a pilot demonstration program designed to handle both recyclables and organic kitchen waste is scheduled to commence in September, 1993.

Collection and Processing of Recyclable Materials

Financial responsibility in terms of funding 3R's is entangled, and slightly different in each of the nine area municipalities due to the fact that each municipality is responsible for its own programming and therefore each offers slightly different 3R's programs and facilities. However, for the most part, in York, the area municipalities assume financial responsibility for collection which is funded through the municipal levy.

In terms of processing, the area municipalities also assume financial responsibility. The costs for processing are based on a cost sharing approach. Each municipality is assessed the gross cost of processing less the revenues received from sale of materials. The costs are allocated to each municipality based on population not actual tonnage. This net cost is financed through municipal taxes. It should be noted that the Region of York assumes financial responsibility for the household hazardous waste and the organic yard waste programs. A tipping fee is charged for both programs however, it does not cover the operating costs of the programs, as a result the shortfall is funded by the Regional Waste Management Reserve Fund.

The curbside collection of Blue Boxes in all of the area municipalities within York is contracted out to private firms, although the contractors use the area municipalities vehicles. The individual contracts allow for collection of recyclables at single and multi-residential units. Over 159,000 rural and urban households have been issued a Blue Box. In 1992, approximately 25,433 tonnes of recyclable material was collected through

the Blue Box program and the depots. The collection of these materials is currently the responsibility of the nine area municipalities. Area municipalities also offer a special collection or depot service for goods that are particular to season or size.

York's Blue Box recycling system includes the operation of two municipally owned materials recycling facilities one located in Markham and the other in Richmond Hill. The facility in Markham services Aurora, King, Vaughan and Markham. An estimated 15,312 tonnes were recycled at this facility in 1992. The facility in Richmond Hill services East Gwillimbury, Newmarket, Whitchurch-Stouffville and Richmond Hill. An estimated 8,796 tonnes were recycled at this facility in 1992. Georgina's Blue Box recyclables are taken to the contractor's transfer station in Georgina where a processor from out of Region picks it up. An estimated 1,325 tonnes were recycled at this facility.

The Region of York offered a mobile HHW collection program for eleven weeks in 1992 (August 20 to October 31) in order to assist in the reduction of toxic materials going to landfill. Some toxic and hazardous materials (i.e. batteries, oil and paint, tires, propane containers) are recycled, however most of the hazardous and toxic materials collected are ultimately disposed of. York contracts with the private sector for processing and disposal of the materials. Approximately 10,407 vehicles delivered HHW in 1992. Collection is monitored as part of the Metro program therefore collection data is included in the Metro data.

In addition to their residential Blue Box, program York Region has provided an organic yard waste composting facility. Approximately 16,300 tonnes of yard waste was received in 1992 from residential and IC&I sources. In 1992, the Region charged the area municipalities and industrial, commercial and institutional establishments that used the facility a tipping fee of \$35.00 per tonne plus GST. Although residents that delivered their own yard waste to the facility were not charged a tipping fee. Any shortfalls in operations were financed through the Regional Waste Management Reserve Fund. Based on research completed by RIS, there are two privately owned facilities in York that are presently composting or producing animal feed from waste in the GTA.

Residential backyard composting is actively promoted in York. It is the responsibility of the lower tier municipalities, although the Region has helped with some promotional efforts. By the end of 1992, 23,500 composting units had been distributed.

All area municipalities provide some curbside collection to residents for white goods. Only King Township reported operating a drop off service at its landfill.

Financing of Waste Diversion Facilities/Programs

The operating expenditures for the existing 3R's facilities/programs include expenses for the following: materials recycling facility, organic yard waste and the household hazardous waste programs, debt charges and administration. In 1992, total expenditures by the Region and the area municipalities approached \$10,848,341 with the collection

representing approximately \$7,557,315 or 69% of the total cost. Processing costs approached \$2,139,336 or 20% of total costs, with administration and overhead costs representing \$1,151,690 or 11% of the total. Further in 1992, operating revenues totalled \$3,077,640. Net cost of the diversion activities in York Region were \$7,770,701.

It is expected that the financial profile in York Region will change considerably in 1993. The major change will take place once the Regional recycling centre opens (scheduled for April 1, 1993) and the processing centres in Richmond Hill and Markham close.

Collection, and Disposal Financing of Landfill Waste

Landfill waste management facilities and programs include: Keele Valley landfill site that Metro Toronto owns and operates; Georgina's landfill site; and two small landfills in King Township.

The majority of York Region's solid waste is disposed in Metro's Keele Valley landfill. The disposal needs of some of the smaller communities in the northern part of the Region are served by landfills in Georgina and King Townships.

The individual area municipalities are responsible for the physical collection and disposal of landfill waste. The waste goes primarily to Keele Valley Landfill site. The area municipalities are charged a tipping fee of \$152.00 per tonne by Metro, however they receive a rebate based on the formula of 1.3 tonnes per household. In 1992, the rebate equated to \$83.86 per tonne. The Metro tipping fees decreased to \$90.00 per tonne as at May 1, 1993.

The collection costs are passed on through the area municipal tax bill, while the disposal costs are passed through on the Regional levy. The tipping fee is based on actual tonnages while the rebate is based on theoretical tonnages and population.

3.3.4 The Regional Municipality of Peel

The Region of Peel has implemented the following programs/facilities to divert waste from landfill:

- * residential Blue Box program;
- * pilot demonstration program in Caledon for commercial Blue Boxes;
- * privately owned and operated MRF located in Mississauga for Brampton and Mississauga materials;
- * privately owned and operated MRF/transfer stations (Bolton & Caledon);
- * household hazardous waste program operated in Brampton at the Britannia landfill site and Bolton Community Centre;

- * salvaging centre at the Caledon landfill site;
- * recycling drop off area at the Britannia Sanitary Landfill site;
- * residential backyard composting program and composting area at Britannia and Caledon landfill site;
- * waste reduction education program including display and promotional materials;
- * residential leaf and yard waste collection program;
- * white goods pick up in Brampton and Mississauga and drop off in Caledon;
- * 2 reusable goods exchanges operated by the Region (Albion and Brampton); in Caledon;
- * compost demonstration site for pilot wet/dry projects.

In 1992, 314,878 tonnes of residential volume of waste was generated. Of this 60,559 tonnes was diverted from landfill and 254,319 tonnes, was disposed equating to a diversion rate of approximately 19% for residential waste. A modest decline from the 1992 volume of waste disposal has been forecast for 1993, as a result of the continuation of export of waste to alternate landfill sites and the start-up of the Peel Resource Recovery facility in February, 1992. It should be noted that the volume of waste for disposal has been declining at a steady rate since 1991 primarily as a result of IC&I (Industrial, Commercial and Institutional) waste being transported by private haulers out of the Region to alternate lower cost disposal sites. The current diversion rate indicates the need to ultimately adopt alternative methods of waste reduction to realize the provincial mandate of 50% waste diversion by the year 2000. The Region has indicated a need for a major waste diversion facility to help realize the provincial targets. Officials of the Region of Peel have expressed interest in the central composting facility which is currently under review in the Region of Halton.

Collection and Processing of Recyclable Materials

Since January, 1991 financial responsibility in terms of funding 3R's has been a Regional Responsibility. The Region assumes financial responsibility for collection and processing which is funded through the reserve which accumulated from the tipping fee charged for landfill waste (since 1978). The Region funds the net collection and processing costs, that is the cost after any revenues received from the sale of recyclable materials and grants.

The administration of the 3R's programs in Peel Region is handled by the three area municipalities. The individual municipalities arrange the physical collection and processing of recyclable materials. All three area municipalities are responsible for and actively participate in the residential Blue Box program although the type of material accepted varies. The residential Blue Box program is a well established municipal collection program serving over 240,228 households, including 64,439 apartment buildings and 56,862 multiple-family dwellings. The area municipalities have also expanded their residential program to include "special" residential wastes. Materials collected from each municipal special residential collection program include leaves, Christmas trees, brush and

phone books. It is anticipated that similar tonnes of recyclable material collected from the area municipal programs would be diverted from landfill in 1993.

In addition to the residential Blue Box program, Caledon implemented a town wide user pay recycling system for its industrial and commercial sectors in late 1991. With the exception of Bolton, collection of recyclables is incorporated into Caledon's regular residential collection system.

In addition to the residential Blue Box program, a recyclable materials drop-off area at the Britannia Sanitary Landfill site is available for use by residents and small businesses who wish to deposit materials such as brush, tires, drywall, clean fill, concrete, asphalt, and cardboard.

The cities of Brampton and Mississauga offer pick up of large household appliances for recycling on regular garbage days. Appliances that are still in usable condition may be taken to any one of the three recycling depots in the Region.

The recyclable materials collected curbside in Mississauga and Brampton are delivered to a private MRF in Mississauga. The materials collected curbside in Caledon are taken to a transfer station within the Region, where the materials are inventoried and sold to material brokers directly.

The Region provides a combination of depots (Mississauga, Brampton, Albion and Caledon) and HHW days for the collection of liquid hazardous wastes, used oil, car batteries, and propane cylinders. It is anticipated that approximately 408,500 litres of HHW would be diverted from landfill in 1993. This does not include an estimated 11,800 car batteries and 3,450 propane units. The depots also accept recyclable materials such as Blue Box materials, metal, tires, wood, cardboard and newspaper.

All three municipalities have their own leaf and yard waste composting programs. Until 1992 Brampton owned and operated their own 5 acre site. The operation is now contracted out. Mississauga collects their leaf and yard waste which is delivered to the Region's compost facility at the Britannia landfill site. Some of the yard waste (20%) is handled at the City's centralized demonstration facility. Leaf and yard waste generated by residents of Caledon is collected and composted at the Caledon landfill site.

In 1989, the Region began a reusable goods exchange program at the Caledon and Albion Sanitary Landfill Sites. There are also new reusable goods exchanges located at the recycling depots in Brampton, Caledon and Albion.

Mississauga offers curbside pick up of white-goods. Caledon provides a drop off, while Brampton has both a drop off and curbside pick up.

The Region of Peel has been actively providing backyard composters since 1985. In the period 1990 to 1992 the Region had provided 50,335 backyard composting bins to Peel

residents.

Financing Waste Diversion Facilities/Programs

The operating expenditures for the existing 3R's facilities/programs include expenses for the following: recycling materials facility, recycling contract operations for collection and processing of Blue Box program; recycling vehicles, HHW programs, debt charges and administration. The total expenditures in 1992 were \$12,622,910, with the recycling collection representing approximately \$6,354,977 or 50% of the total cost, while processing represented 21% of the cost at \$2,677,100. The remaining \$3,590,833 was as a result of overhead and administration costs and these represent 29% of the total. The revenues totalled \$1,955,000 in 1992, and as a result net diversion cost approached \$10,667,910.

Collection, Disposal and Financing of Landfill Waste

Landfill waste management facilities and programs include: Britannia landfill site with small quantities going to the Caledon and Albion landfill sites. Peel Region's waste is disposed primarily in the Britannia landfill site, with small quantities going to the Caledon and Albion landfill sites.

The individual area municipalities are responsible for the physical collection and disposal of landfill waste. The Region's tipping fee is \$150.00, however in April 1993, Peel Regional Council voted to reduce its landfill tipping fee to \$80.00/tonne for loads of mixed waste.

3.3.5 REGIONAL MUNICIPALITY OF HALTON

The Region of Halton has implemented the following programs/facilities to divert waste from landfill:

- * bi-weekly Blue Box recycling program;
- * "Shared Responsibility Demonstration Project" whereby the Region is responsible exclusively for the collection of recyclables and the Province in conjunction with the industrial/commercial sector are responsible for the provision of the material recycling facility (MRF);
- * Igloo program that services both rural and high traffic urban public areas;
- * household hazardous waste (HHW) programs in Burlington and Milton;
- * pilot HHW collection program that includes the distribution of 500 household hazardous waste containers to area residents;
- * residential backyard composting program;
- * waste reduction education program including display and promotional materials;
- * Regional transfer stations that have bins specifically for cardboard, scrap

- metals, and recyclables;
- * 4 waste container stations designed to accept residential and some IC&I recyclable materials;
- * recycling depots in Halton Hills for materials not accepted by the Blue Box;
- * reuse centre;
- * residential leaf and yard waste programs;

The Region's 1992 volume of waste for disposal has been estimated at 105,400 tonnes while the volume of recyclable materials diverted from landfill was estimated to be 27,000 tonnes, equating to a diversion rate of approximately 20%. A modest decline from the 1992 volume of waste disposal has been forecast for 1993, as a result of the bans placed on the disposal of grass clippings which have been issued by Burlington and Oakville.

The 1993 volume of waste for disposal has been forecasted downwards to approximately 93,700 tonnes. Officials at the Region of Halton indicated that the volume of waste for disposal has declined at a steady rate since 1991, primarily as a result of IC&I (Industrial, Commercial and Institutional) waste being transported by private haulers out of the Region to alternate lower cost disposal sites. The budgeted volume of recyclable materials for 1993 is 28,000 tonnes. This equates to a diversion rate of approximately 30%. It should be noted that the diversion rate is projected to increase in 1993 however, it is not due to a major increase in diversion volumes but due to a decrease in landfill volumes. Therefore, this indicates the need to ultimately adopt alternative methods of waste reduction to realize the provincial mandate of 50% waste diversion by the year 2000. The Region has indicated that a major waste diversion facility in the form of a central composting facility is under review.

Collection and Processing of Recyclable Materials

Financial responsibility in terms of funding 3R's is entangled, and slightly different in each of the four area municipalities due to the fact that each municipality offers slightly different 3R's programs and facilities. However, for the most part, in Halton, the Region assumes financial responsibility for collection which is funded through the Regional levy. In terms of processing, the Region also assumes financial responsibility. A tipping fee of \$100.00 per tonne is charged to each municipality for recyclable materials delivered to the MRF. The tipping fee charged does not necessarily cover the total costs of administering and collecting recyclable materials. The tipping fee charged to each municipality is financed through municipal taxes.

Commencing February 1, 1993 the curbside collection of Blue Boxes in Halton Region was tendered out to a private hauler. The new contract initiated a bi-weekly collection cycle as well as expanded the range of materials collected. Items such as aluminum foil, high density plastic and boxboard are now collected.

In addition, the arrangement required the contractor to assume the maintenance of the existing recycling truck fleet thereby reducing overall fleet maintenance costs. The

contract period is five years and includes the area municipalities of Milton, Oakville, and Burlington with an option to include Halton Hills. (There was an option in the tender to not include Halton Hills based on its remote location, however, Halton Hills obtained a collection price that they could not meet themselves so they went with the same contractor as the Region. Halton Hills funds their own collection costs through the local levy.)

The new agreement allows for collection of recyclable materials at single and multi residential units and apartment buildings but no longer allows for collection at institutional facilities such as non-profit organizations, municipal offices, and local hospitals.

The area municipalities have also expanded their residential program to include "special" wastes. Special materials collected include leaves, Christmas trees, brush and phone books.

Coinciding with the new residential Blue Box collection contract is the introduction of the previously mentioned "Shared Responsibility Demonstration Project", whereby the Region is financially responsible for the collection of recyclables while the Province in conjunction with the commercial/industrial sector (Halton Recycled Resources) is responsible for provision of the materials recycling facility (MRF). The Province has provided a grant (\$1.4 million) to the contractor, via the Region, for the costs associated with the processing of recyclable materials. The new facilities at Halton Recycled Resource's MRF have essentially allowed operations at the Region owned MRF in Oakville to be terminated.

One of the projects many objectives is to increase both the volume and range of materials collected and processed. Halton receives from Halton Recycled Resources \$20.00/tonne in revenues for all recyclables delivered to the facility. Halton Region has estimated that approximately \$500,000 in revenues will be generated from the collection of recyclables in 1993. This would in part offset the loss of the Provincial grants to the area municipalities from the Ministry of the Environment and Energy (MOEE) for the collection of recyclables, which in 1992 amounted to approximately \$1.2 million.

According to officials at Halton Region and MOEE this pilot demonstration program will run for a one year period with an option to renew for a second year.

Halton Region also provides container facilities in Burlington, Halton Hills, Milton and Oakville which accept small loads of residential waste and recyclable materials. However, at the time of writing recommended program changes included a proposal to close two of the container stations (Burlington and Halton Hills). The 1993 budget projected that 4,350 tonnes of recyclable materials would be diverted at these facilities.

With respect to the Household Hazardous Waste Program, consideration is being given to expansion of the program to once weekly, compared to the current once monthly depot openings. In addition, the Region is conducting a pilot HHW collection program whereby 500 household hazardous waste containers will be distributed to residents. The objective of this collection procedure is to reduce the costs of collection. The capital cost is being

financed through the 1992 budget and the estimated cost is \$12,000.

At present, Halton has a contracted Igloo container collection program whereby the containers are placed at strategic locations for the collection of recyclables. Collection of approximately 900 tonnes of recyclables, from 12 drop off depots, is anticipated for 1993.

Financing Waste Diversion Facilities/Programs

The operating expenditures for the existing 3R's facilities/programs include expenses for the following: recycling materials facility, recycling contract operations, Igloo program, recycling vehicles, contract collection, HHW programs, debt charges and administration. The total expenditures approached \$4.5 million in 1992 with the recycling processing operations representing approximately \$1.1 million or 24% of the total cost. Collection costs in the same year totalled \$2.0 million or 45% of the total, with administration and overhead costs approximating \$1.4 million or 32% of the total. In 1992, grant revenues totalled \$2.2 million this includes \$1,400,000 related to the Shared Recycling Demonstration Project whereby the Province has provided a grant to the contractor via the Region, for the costs associated with the processing of recyclable materials. In addition, revenues of \$780,000 and \$20,000 are expected from the collection of recyclable materials delivered to the new MRF operation and for the HHW program respectively.

On the basis of the above costs and revenues, the net cost to provide 3R's facilities and programs in 1992 for Halton Region approached \$2.2 million after grants and other revenues.

Collection and Disposal of Landfill Waste

Landfill waste management facilities and programs include:

- * \$53.0 million new waste management site which commenced operations in late 1992;
- * closed landfill sites which still require maintenance and monitoring;
- * container stations for receipt of small amounts of residential and HHW waste.

The opening of the landfill site terminated the export of landfill waste to disposal sites outside Halton Region.

At the present time, waste collection is an area municipal responsibility while waste disposal is a Regional (levy) responsibility. The 1993 forecast for municipal waste is 93,700 tonnes of waste, a modest decline from 1992 due to the ban on the disposal of grass clippings in Oakville and Burlington. The I&I waste stream is budgeted to be 10,000 tonnes a drop of nearly 80% over 1991 levels. This is due to alternate lower cost disposal sites located primarily south of the border.

The tipping fee for disposal has remained constant for 1993 at \$150 per tonne despite declining tonnages.

3.4 PROVINCIAL FUNDING

The Ministry of the Environment and Energy provides funding and technical assistance for projects which help achieve the Provincial waste diversion targets. There are a number of different grants/programs currently in place which are described below.

3.4.1 Municipal Recycling Support Grants

These grants help the municipalities with the planning, implementation, operation and expansion of recycling projects. They help to reduce waste disposal requirements and provide other environmental benefits to Ontario. More specifically the municipal recycling support grants cover:

- * Capital costs: support for the costs of facilities and equipment needed by the project.
- * Operating costs: support for the cost of operating municipal recycling programs. Grant amounts are based on the lesser of a percentage of total costs or the net operational cost (costs less revenues). New municipalities can receive up to five years of funding. In year one, they are eligible to receive up to 50 percent funding; 40 percent in year two and 33 percent in each of the three remaining years. Municipalities that were on the program as of April 1, 1991, and those that have expended the five year eligibility period on or prior to that date, are eligible to receive up to three additional years of funding at 33 percent.
- * Feasibility studies: municipalities can receive grants up to 50 percent of the costs of feasibility studies to implement a recycling program
- * Promotion and advertising: grants up to 50 percent of promotional and advertising costs over five years.
- * Demonstration projects: grants up to 100 percent for the costs of demonstration projects designed to develop innovative recycling methods or technologies.
- * Education projects: grants up to \$15,000 to support unique educational projects designed to raise the awareness and understanding of the 3R's.

The Table 3-3 summarizes the Municipal Recycling Support Grant Expenditures for the fiscal years 1989 to 1993.

Table 3-3

**Municipal Recycling Support Grant
 In the GTA**

| Year | Capital (\$) | Operating (\$) | Total (\$) |
|-------|--------------|----------------|------------|
| 1989 | 1,256,321 | 1,484,695 | 2,741,016 |
| 1990 | 3,060,397 | 3,741,056 | 6,801,453 |
| 1991 | 3,597,261 | 9,245,832 | 12,843,093 |
| 1992 | 1,112,187 | 6,314,857 | 7,427,044 |
| 1993 | 34,539 | 525,918 | 560,457 |
| Total | 9,060,705 | 21,312,358 | 30,373,063 |

Source: MOEE, Waste Reduction Office

Table 3-4

**Municipal Reduction/Reuse Grants
 in the GTA**

| Year | Capital (\$) | Operating (\$) | Total (\$) | Composting Units |
|-------|--------------|----------------|------------|---------------------|
| 1989 | 377,607 | 966 | 378,573 | 16,180 |
| 1990 | 611,678 | 77,123 | 688,801 | 24,720 |
| 1991 | 1,695,492 | 76,828 | 1,772,320 | 85,145 |
| 1992 | 2,722,018 | 238,861 | 2,960,879 | 94,346 |
| 1993 | 478,694 | 9,421 | 488,115 | 15,482 |
| Total | 5,885,489 | 403,199 | 6,288,688 | 235,873 |

Source: MOEE, Waste Reduction Office

3.4.2 Municipal Reduction/Reuse Grants

These grants are aimed at reducing the amount of waste going into the municipal waste stream. More specifically, these include projects to encourage less packaging, home composting projects and the development of new product approaches. The grants cover:

- * Capital costs: grants of up to 66 percent of the purchase cost of home composters. Support for other types of reduction projects are considered on

a case-by-case basis.

- * Developmental costs: development of creative materials or approaches may be funded up to 100 percent to a limit of \$25,000.
- * Promotional costs: grants of up to 50 percent are available for municipal solid waste audits and public education.

The Table 3-4 summarizes the Municipal Reduction/Reuse Program Expenditures for the fiscal years 1989 to 1993.

3.4.3 3R's Funding Program

These grants are for projects that recover materials from the mixed waste stream. Assistance is available to establish facilities to recover or process paper, compost, aluminum, steel, glass, plastic or other materials. Grants are available for:

- * Capital costs: grants up to one third of the costs of facilities;
- * Research/development costs: grants up to 100 percent of the projects cost of demonstrating or evaluating the proposal

The following table summarizes the 3R's Funding Program Expenditures for the fiscal years 1990 to 1992.

Table 3-5

3R's Funding Program
in the GTA

| Year | Capital Expenditure |
|-------|---------------------|
| 1990 | 281,819 |
| 1991 | 520,561 |
| 1992 | 2,699,368 |
| Total | 3,501,748 |

Source: MOEE, Waste Reduction Office

3.4.4 Household Hazardous Waste Collection Program

This program helps to divert hazardous waste away from municipal landfills and sewage treatment systems. Grants are available for special waste days/weekends or events and permanent depots. The amount of funding is limited to 50 percent of the incurred costs up to \$5,000 per year. Funding can increase by an additional \$10,000 for a total maximum grant of \$15,000, or a part of \$10,000 equivalent of the collected volume of waste diverted from disposal to reuse, recycling or refining or 50 percent of the total project cost, whichever is less.

3.4.5 Financial Assistance Program

The program assists with the implementation of new or expanded existing waste management facilities such as landfill sites, transfer stations and processing facilities. Eligible activities range from capital costs associated with construction, equipment, land and design, and includes Environmental Assessment hearing costs if associated with a master plan. Private waste management facilities are not funded except where a municipality can demonstrate that it does not have the resources to establish and operate a waste management facility. Applicants are placed in groups based on population in order to ensure fair and equitable distribution of funds.

3.5 PRIVATE FUNDING

OMMRI: Corporations in Support of Recycling is founded on a forerunner organization, Ontario Multi-Material Recycling Incorporated, whose membership comprises of the soft drink industry, and its container and container material suppliers. This organization worked closely with municipalities and the Ministry of the Environment and Energy to increase the number of "Blue Box" households to two million from 150,000, the number of boxes in use in 1986. It also helped fund recycling programs for 144,000 apartment units and 113,000 rural residences. Although their original four year, \$20 million mandate has been met, the soft drink industry continues to support multi-material recycling through OMMRI: Corporations in Support of Recycling.

At the beginning of 1990, six industry sectors responded to the Government of Ontario's challenge to broaden private sector involvement in waste reduction activities. Signing a Memorandum of Understanding with the government, they established a cooperative arrangement to help develop a province-wide waste reduction system based on the Blue Box recycling program. Industry agreed to provide \$45 million over five years, 1990 to 1994, to help fund the system. It created OMMRI: Corporations in Support of Recycling to distribute the funds.

OMMRI currently contributes one-third of the capital costs of Blue Boxes, recycling trucks and processing equipment to municipal recycling organizations as well as assistance for costs associated with promoting, launching and expanding municipal recycling programs.

As of January 8, 1992 OMMRI has put all requests for funding in the GTA on hold. According to representatives of OMMRI they will continue to place all funding requests (except for the Crinc operation in Metro that commenced operations in May, 1992) on hold until the Government honours the Memorandum of Understanding that calls for "level playing field legislation" whereby all industry would be required to become involved in the funding of recycling activities. It should be noted that OMMRI is paying outstanding commitments in 1993.

Future initiatives of OMMRI's include a cooperative program with the Ontario Soft Drink Association's (OSDA) which developed a Top-Up formula to ensure that the cost of recycling soft drink containers in the Blue Box program is not born by the municipal tax payer. In 1992, the operating subsidy was determined to be \$50.00 per tonne of soft drink material recycled. The program has processed approximately \$380,000 in operating grants so far.

3.6 FUTURE WASTE DIVERSION COMMITMENTS

This section of the report presents the analysis of the committed capital for future diversion activities. The analysis included a review of each Region's and Area Municipalities' 1993 current and five year capital budgets and the most recent development charges study where available. In addition, the analysis included telephone interviews with various Regional staff to augment the budget information provided.

The analysis includes **new** capital or program items that would potentially change existing financing requirements. More specifically, the activities presented only include expenditures that could potentially increase the amount of tonnage diverted, therefore inflation increases to existing budget items have not been included. For example, in Halton Region a new Household Hazardous Waste Depot is planned and would potentially increase diversion, therefore the associated costs have been included in the analysis.

Table 3-6 presents a summary of the 1993 capital and program commitments as well as capital and program commitments for the years 1994 to 1997, for the entire GTA. Table 3-6 also includes other items that we have been advised of, but were not included in either the capital budget or development charges studies.

Table 3-6

**Waste Diversion Capital Commitments
in the GTA**

| Region | 1993 Commitments | 1994 - 1997 Commitments | Not Identified in Budgets | Total Program |
|---------------|-----------------------------|------------------------------------|--------------------------------------|--------------------------|
| Durham | 1,475,500 | 2,400,000 | | 3,875,500 |
| Metro | 9,105,000 | 60,824,000 | 70,406,000 | 140,335,000 |
| York | 2,785,100 | | | 2,785,100 |
| Peel | 25,700,000 | 64,600,000 | | 90,300,000 |
| Halton | 791,400 | | 26,500,000 | 27,291,400 |
| Total GTA | 39,857,000 | 127,824,000 | 96,906,000 | 264,587,000 |

Source: 1993 Municipal Capital Budgets

3.6.1 Durham Region

The review of Durham Region's 1991 Development Charges Study and the 1993 Capital and Operating Budgets and five year forecast for Waste Diversion indicated the following:

\$2,788,400 has been allocated in the 1993 capital budget for the design and construction of an expansion to the Regional Recycling Centre. Approximately, \$388,400 has been allocated in 1993 and the remaining \$2,400,00 in the years 1994 to 1997.

\$702,200 has been allocated in the 1993 operating budget as a result of changes to programs related to the Recycling Centre and Recycling programs, including extended hours of operation, additional staff, expansion of the Igloo program and deletion of the Toxic Taxi program.

\$384,900 has been allocated in the 1993 operating budget as a result of the introduction of the sale of home composters, the Pickering Compost Study and new community events programs.

Table 3-7 summarizes the committed capital expenditures for waste diversion activities for Durham Region. This table shows that Durham Region and the local municipalities anticipate spending a total of \$3.8 million (\$1.4 million plus \$2.4 million) over the next five years. This total capital cost has been used to evaluate the relative effects of each of the alternative diversion systems.

3.6.2 Metropolitan Toronto

The review of Metro Toronto's 1993 Capital and Operating Budgets and five year forecast for Waste Diversion indicated the following had been committed:

\$69,697,000 (land and facility) has been allocated in the capital budget for a Regional Composting Plant. Approximately \$27,000,000 has been allocated in the years 1994 to 1997 with the remaining costs budgeted post 1997.

\$34,310,000 (land and facility) has been allocated in the capital budget for Recycling Centre #3. Approximately \$9,000,000 has been allocated in the years 1994 to 1997 with the majority of the cost budgeted post 1997.

\$22,420,000 (facility only) has been allocated in the capital budget for Recycling Centre #2. Approximately \$3,600,000 has been allocated in 1993 with re remaining costs in the years 1994 to 1997.

\$4,281,000 has been allocated in the capital budget for a Recycling Depot. Approximately \$1,031,000 has been allocated in 1993 with the majority of the costs budgeted in the years 1994 to 1996.

\$1,158,000 has been allocated in the capital budget for equipment for the MRF. on Commissioner Street. Approximately \$1,058,000 has been allocated in 1993.

\$507,000 has been allocated in the capital budget for a Household Hazardous Waste Depot. Approximately \$330,000 has been allocated in 1993 with the remaining costs budgeted in the years 1994 and 1995.

\$180,000 has been allocated in the capital budget for additional market development, research and product testing associated with the Wet Collection and Processing Program. The total program cost was estimated to be \$2,761,000. It should be noted that the program is winding down.

Table 3-7

CAPITAL COMMITMENTS FOR DURHAM REGION

| Commitments | 1993 Commitments | 1994-1997 Commitments | Other Capital not Identified in Budgets | Total Capital Cost |
|-----------------------------------|---------------------|--------------------------|--|-----------------------|
| Major Commitments | | | | |
| Recycling Centre Expansion | 388,400 | 2,400,000 | | 2,788,400 |
| Subtotal Major Commitments | 388,400 | 2,400,000 | 0 | 2,788,400 |
| Minor Commitments | | | | |
| Recycling Centre Operations | 702,200 | | | 702,200 |
| Waste Reduction Operations | 384,900 | | | 384,900 |
| Subtotal Minor Commitments | 1,087,100 | 0 | 0 | 1,087,100 |
| Total Major Commitments | 388,400 | 2,400,000 | 0 | 2,788,400 |
| Total Minor Commitments | 1,087,100 | 0 | 0 | 1,087,100 |
| Total Commitments | 1,475,500 | 2,400,000 | 0 | 3,875,500 |
| | ===== | ===== | ===== | ===== |

Source: 1993 Municipal Capital and Operating Budgets and Development Charges Study
Compiled by Future Urban Research

| Table 3-8 | | | | |
|--|---------------------|--------------------------|--------------------------|-----------------------|
| CAPITAL COMMITMENTS FOR METRO REGION | | | | |
| Commitments | 1993 Commitments | 1994-1997 Commitments | Post-1997 Commitments | Total Capital Cost |
| Major Commitments | | | | |
| Composting Plant | | | | |
| Facility | | 22,915,000 | 42,858,000 | |
| Land | | 3,924,000 | | 69,697,000 |
| Material Recycling Facility #3 | | | | |
| Facility | | 8,755,000 | 25,227,000 | |
| Land | | 328,000 | | 34,310,000 |
| Recycling Depot | 1,031,000 | 3,250,000 | | 4,281,000 |
| HHW Depots | 330,000 | 177,000 | | 507,000 |
| Material Recycling Facility #2 | | | | |
| Facility | 3,627,000 | 18,793,000 | | 22,420,000 |
| Subtotal Major Commitments | 4,988,000 | 58,142,000 | 68,085,000 | 131,215,000 |
| Minor Commitments | | | | |
| Commissioner Street MRF | 1,058,000 | 100,000 | | 1,158,000 |
| Wet Collection & Processing | 180,000 | | | 180,000 |
| Recycling Start-Up | | | | |
| Start-Up | 114,000 | 18,000 | | |
| Transfer Trailers | 309,000 | 373,000 | | |
| Apartment Start-Up | 762,000 | | | 1,576,000 |
| Backyard Composters | 1,227,000 | 501,000 | | 1,728,000 |
| Roll-Off Containers for | | | | |
| Banned Material | 124,000 | 241,000 | | 365,000 |
| Prototype Vehicle | 147,000 | | | 147,000 |
| Tire Recycling | 196,000 | | | 196,000 |
| Wood Shredding & | | | | |
| Tire Recycling | | 1,449,000 | 2,321,000 | 3,770,000 |
| Subtotal Minor Commitments | 4,117,000 | 2,682,000 | 2,321,000 | 9,120,000 |
| Total Major Commitments | 4,988,000 | 58,142,000 | 68,085,000 | 131,215,000 |
| Total Minor Commitments | 4,117,000 | 2,682,000 | 2,321,000 | 9,120,000 |
| Total Commitments | 9,105,000 | 60,824,000 | 70,406,000 | 140,335,000 |
| ===== | | | | |
| Source: 1992 Municipal Capital Budgets and Four Year Forecasts | | | | |
| Compiled by Future Urban Research | | | | |

\$1,576,000 has been allocated for the start up of recycling collection with \$1,185,000 being included in the 1993 capital budget. The total cost of the program was approximately \$13,811,000 of which the majority has been allocated prior to 1993.

\$1,728,000 has been allocated in the 1993 capital budget in association with the sale and distribution of Backyard Composters. The total cost of the program was approximately \$8,260,000 of which the majority has been allocated prior to 1993.

\$365,000 has been allocated for Roll Off Containers for Banned Material with \$124,000 being allocated in the 1993 capital budget. Approximately \$241,000 is allocated in 1994.

\$147,000 has been allocated in the 1993 capital budget in association with the prototype vehicles for recyclables. The total cost of the vehicle was approximately \$489,000 of which the majority has been allocated prior to 1993.

\$196,000 has been allocated in the 1993 capital budget in association with tire recycling. The total cost of the program was approximately \$292,000 of which \$96,000 has been allocated prior to 1993.

\$1,449,000 has been allocated in the years 1994 to 1997 for the purchase of equipment and construction of a special wood shredding and tire recycling facility. The total cost of the program is approximately \$3,770,000 of which \$2,321,000 has been allocated post 1997.

Table 3-8 summarizes the committed capital expenditures for waste diversion activities for Metro Region. This table shows that Metro Region and the local municipalities anticipate spending a total of \$69.9 million (\$9,105,000 plus \$60,824,000) over the next five years. The capital budgets, however, indicate that an additional \$70.4 million will continue after 1997. This brings the total committed program to \$140.3 million and, for analysis purposes, this latter total capital cost has been used to evaluate the relative effects of each of the alternative diversion systems.

The second system evaluated is the Committed System which includes all new capital or program items that could potentially change existing financing arrangements. Moreover, for all other Regions examined, this definition just includes 'those programs that have been identified as committed within the municipalities' five year capital budgets. In the case of Metro Toronto, however, construction of the compost facility, the MRF #3 and the tire recycling facility extends beyond 1997. Since these projects are to be initiated within the five year forecast, Metro's intention to undertake these projects is clear. For this reason, therefore, the full cost of the committed program is used for evaluation purposes, rather than just the total of capital costs for the next five years. In the evaluation of alternative

systems, however, caution was exercised when viewing analysis results in case this treatment of projects over-estimates system costs.

3.6.3 York Region

A review of York Region's 1991 Development Charge Policy Report and the 1993 Budget Detail for Environmental Services including Waste Diversion indicated the following:

\$2,224,000 has been allocated in the budget for a Regional Materials Recovery Facility. The existing municipal facilities will terminate operations when the Regional facility commences operations.

\$445,100 has been allocated in the budget as a result of an increase in payments to contractors as a result of an increase in the service level in the Household Hazardous Waste Program.

\$116,000 has been allocated in the budget as a result of an increase in payments to contractors as a result of an increase in the service level in the Organic Yard Waste operations.

Table 3-9 summarizes the committed capital expenditures for waste diversion activities for York Region. This table shows that York Region and the local municipalities anticipate spending a total of \$2,785,100 in 1993. It is important to note that the Region of York does not at the present time prepare a five year capital forecast for Waste Management. Therefore, the above mentioned 1993 total capital cost of \$2,785,100 has been used to evaluate the relative effects of each of the alternative diversion systems.

3.6.4 Peel Region

A review of Peel Region's 1993 Capital and Operating Budgets for Waste Diversion indicated the following:

\$25,800,000 has been allocated to design and construct seven community recycling centres/depots/satellite drop-off facilities: three in Mississauga, two in Brampton and one in Caledon which would accept recyclables, household hazardous waste, reusable items and residential waste. \$5,000,000 has been budgeted in 1993 and \$20,800,000 has been budgeted for the facilities between the years 1994 to 1997. According to officials at the Region, the facilities may or may not proceed. The net annual impact would be approximately \$800,000 including reserve contributions of \$385,000.

Table 3-9

CAPITAL COMMITMENTS FOR YORK REGION

| Commitments | 1993 Commitments | 1994-1997 Commitments | Total Capital Cost |
|-----------------------------------|-----------------------------|----------------------------------|-------------------------------|
| Major Commitments | | | |
| Materials Recovery Facility | 2,224,000 | | 2,224,000 |
| Subtotal Major Commitments | <u>2,224,000</u> | <u></u> | <u>2,224,000</u> |
| Minor Commitments | | | |
| HHW Program | 445,100 | | 445,100 |
| Organic Yard Waste | 116,000 | | 116,000 |
| Subtotal Minor Commitments | <u>561,100</u> | <u>0</u> | <u>561,100</u> |
| Total Major Commitments | 2,224,000 | 0 | 2,224,000 |
| Total Minor Commitments | 561,100 | 0 | 561,100 |
| Total Commitments | <u>2,785,100</u> | <u>0</u> | <u>2,785,100</u> |
| | ===== | ===== | ===== |

Source: 1993 Municipal Capital and Operating Budgets and 1991 Development Charge Policy Report
 Compiled by Future Urban Research

Table 3-10

CAPITAL COMMITMENTS FOR PEEL REGION

| Commitments | 1993 Commitments | 1994-1997 Commitments | Total Capital Cost |
|-----------------------------------|---------------------|--------------------------|-----------------------|
| Major Commitments | | | |
| Community Recycling Centres | 5,000,000 | 20,800,000 | 25,800,000 |
| Materials Recovery Facility | 10,500,000 | 14,500,000 | 25,000,000 |
| Regional Composting Facility | 10,000,000 | 28,500,000 | 38,500,000 |
| Subtotal Major Commitments | 25,500,000 | 63,800,000 | 89,300,000 |
| Minor Commitments | | | |
| Waste Reduction and Recovery | 100,000 | 400,000 | 500,000 |
| Mini Recycling Depots | 100,000 | 400,000 | 500,000 |
| Subtotal Minor Commitments | 200,000 | 800,000 | 1,000,000 |
| Total Major Commitments | 25,500,000 | 63,800,000 | 89,300,000 |
| Total Minor Commitments | 200,000 | 800,000 | 1,000,000 |
| Total Commitments | 25,700,000 | 64,600,000 | 90,300,000 |
| | ===== | ===== | ===== |

Source: 1993 Municipal Capital and Operating Budgets
Compiled by Future Urban Research

\$25,000,000 has been allocated in the budgets for the design and construction of a Material Recovery Facility to process residential recyclable materials from Blue Box collections, Community Recycling Centres and the new mini depots. \$10,500,000 has been budgeted in 1993 while in the years 1994 to 1997, \$14,500,000 has been allocated.

\$38,500,000 has been budgeted to establish a central composting facility either in Peel or in conjunction with Halton Region. \$10,000,000 has been budgeted in 1993 and in the years 1994 to 1997 \$28,500,000 has been allocated. Due to the uncertainty of the configuration of the facility, incremental operating costs have not been included in this analysis.

\$500,00 has been allocated in the budgets, for the design and construction of mini recycling depots to service residents who cannot be serviced by conventional methods (i.e. container stations). \$100,00 has been allocated in 1993 and \$400,000 has been allocated in the years 1994 to 1997.

\$500,000 has been allocated in the budgets to cover unexpected expenses relating to future facilities and planning. \$100,000 has been allocated in 1993 while \$400,000 has been allocated in the years 1994 to 1997.

Table 3-10 summarizes the committed capital expenditures for waste diversion activities for Peel Region. This table shows that Peel Region and the local municipalities anticipate spending a total of \$90,300,000 (\$25,700,000 in 1993 plus \$64,600,000 in the years 1994 to 1997) over the next five years. This total capital cost has been used to evaluate the relative effects of each of the alternative diversion systems.

3.6.5 Halton Region

The review of Halton Region's 1993 Development Charges Study and the 1993 Capital and Operating Budgets and five year forecast for Waste Diversion indicated that the following had been committed:

\$500,000 has been allocated in the 1993 capital budget for the design and construction of a new Household Hazardous Waste Depot on location at the new Regional landfill site.

\$25,000,000 has been allocated for the design and construction of a Regional Composting Facility. At the present time the facility is under review while the Region works out the details of ownership and sizing. It is important to note

that no provision has been made for the facility in the 1993 Capital Budget and five year forecast. However, we have assumed that the Region would proceed with the facility and incur the above mentioned capital cost.

\$255,000 has been allocated in the Development Charges Study for the purchase of recycling vehicles over the period 1993 to 1997, however, the Operating Budget indicated that the vehicles would be sold (for approximately \$255,000) in conjunction with the new tender contract for the collection of recyclables.

\$207,000 has been allocated in the 1993 operating budget as a result of a change in the service level of the Household Hazardous Waste Depot in Burlington. The facility will operate each Saturday of the month as opposed to once per month as in prior years.

\$1,587,700 has been allocated in the operating budget as a result of a change to the Recycling Contract Operations as a result of the "Shared Responsibility Demonstration Project", whereby the Region is financially responsible for the collection of recyclables while the Province in conjunction with the Commercial/industrial sector (Halton Recycled Resources) is responsible for provision of the materials recycling facility. The Province has provided a grant for the costs associated with the processing of the materials. When the grant terminates there would be an additional \$1,500,000 cost to the Region which the analysis has accounted for. The grant is for a one year term with an option to renew in 1994. The new facilities at Halton Recycled Resource's MRF. have essentially allowed operations at the Region owned MRF. in Oakville to be terminated. A reduction of \$145,000 in the 1993 operating budget has been estimated as a result of the closure of the Regional MRF.

\$34,300 has been estimated in the 1993 operating budget as the result of expansion to the Igloo Program. An additional 24 Igloo's are proposed to be added to the program in 1993.

\$107,400 has been estimated in the 1993 operating budget as the result of additional Waste Reduction Education Programs and Display Materials design to increase participation rates.

Table 3-11 summarizes the committed capital expenditures for waste diversion activities for Halton Region. This table shows that Halton Region and the local municipalities anticipate spending a total of \$27,291,400 (\$791,400 in 1993 plus \$26,500,000 in 1994 to 1997) over the next five years. It is important to note that proceeds of \$145,000 and \$255,000 from the sale of the recycling vehicles and from the closure of the recycling materials facility have been taken into consideration in arriving at the total cost. This total capital cost has been used to evaluate the relative effects of each of the alternative diversion systems.

Table 3-11

CAPITAL COMMITMENTS FOR HALTON REGION

| Commitments | 1993 Commitments | 1994-1997 Commitments | Other Capital not Identified in Budgets | Total Capital Cost |
|-----------------------------------|---------------------|--------------------------|--|-----------------------|
| Major Commitments | | | | |
| HHW Depot | 500,000 | | | 500,000 |
| Regional Composting Facility | | | 25,000,000 | 25,000,000 |
| Recycling Vehicles | | | 255,000 | 255,000 |
| Subtotal Major Commitments | <u>500,000</u> | <u>0</u> | <u>25,255,000</u> | <u>25,755,000</u> |
| Minor Commitments | | | | |
| HHW Programs (Bur. & Mil) | 207,000 | | | 207,000 |
| Recycling Contract Operations | 87,700 | | 1,500,000 | 1,587,700 |
| Recycling Mat. Fac. Closure | -145,000 | | | -145,000 |
| Igloo Program Expansion | 34,300 | | | 34,300 |
| Sale of Rec. Vehicles | | | -255,000 | -255,000 |
| Waste Reduction Administration | 107,400 | | | 107,400 |
| Subtotal Minor Commitments | <u>291,400</u> | <u>0</u> | <u>1,245,000</u> | <u>1,536,400</u> |
| Total Major Commitments | 500,000 | 0 | 25,255,000 | 25,755,000 |
| Total Minor Commitments | 291,400 | 0 | 1,245,000 | 1,536,400 |
| Total Commitments | <u>791,400</u> | <u>0</u> | <u>26,500,000</u> | <u>27,291,400</u> |
| | ===== | ===== | ===== | ===== |

Source: 1993 Municipal Capital and Operating Budgets and Development Charges Study
Compiled by Future Urban Research

4.0 MUNICIPAL FINANCE PROFILES

This chapter presents financial profiles for each of the Regions within the GTA. This information is presented as baseline background information and this will be used to test the alternative diversion systems to determine the financial effect of the individual options. By presenting the baseline financial profiles, no intention has been made to judge the alternative diversion systems in terms of the financial capabilities of the individual municipalities in the GTA. Before detailing the individual financial profiles, an overview of selected municipal finance items is presented.

As described in the methodology section of this report, the financial profiles are based on 1990 (MARS) data, that being the most recent complete set of data available. Before finalization of this report this data will be revised to include the most recent possible. This base case information, however, will include the diversion budget information from 1992 presented in the previous chapter.

4.1 OVERVIEW

Each of the GTA Regions have very different financial characteristics. These centre around six specific financial aspects:

- * the size of the commercial and industrial sector within the Region's tax base;
- * the sources of revenue available to finance expenditures;
- * the actual level of service expenditures;
- * the amount of debt carried by the tax payers;
- * the amount of reserves available to fund expenditures.
- * the actual (or average) level of property taxes in the Region;

It will be demonstrated that, while each Region has a different mix and blend of financial characteristics, each Region has specific advantages in one of more of these fiscal categories. This will be demonstrated in the individual financial profiles. Specifically, after reviewing the financial base information the following pattern can be discerned:

GTA 3R ANALYSIS
MUNICIPAL FINANCE COMPARISON

Table 4-1

| | Durham | Metro | York | Peel | Halton |
|-------------------------------------|--------|-------|-------|-------|--------|
| Persons Per Household | 2.55 | 2.41 | 2.75 | 2.71 | 2.66 |
| Residential Assessment % | 74% | 53% | 73% | 67% | 75% |
| Comm'l/Ind'l Assessment % | 26% | 47% | 27% | 33% | 25% |
| Avg Property Taxes - Dollars | | | | | |
| - Local | 481 | 246 | 314 | 433 | 502 |
| - Regional | 341 | 620 | 519 | 325 | 333 |
| - Direct Charges | 210 | 149 | 208 | 184 | 224 |
| Subtotal Municipal Tax | 1,032 | 1,015 | 1,041 | 942 | 1,059 |
| - Schools | 961 | 1,152 | 1,917 | 1,192 | 1,148 |
| Total Tax Per Household | 1,993 | 2,167 | 2,958 | 2,134 | 2,207 |
| Avg Property Taxes - Percent | | | | | |
| - Local | 24% | 11% | 11% | 20% | 23% |
| - Regional | 17% | 29% | 18% | 15% | 15% |
| - Direct Charges | 11% | 7% | 7% | 9% | 10% |
| - Schools | 48% | 53% | 65% | 56% | 52% |
| Total Tax Per Household | 100% | 100% | 100% | 100% | 100% |
| Revenue Distribution | | | | | |
| - Property Tax | 46% | 42% | 52% | 50% | 52% |
| - Grants | 23% | 24% | 18% | 16% | 17% |
| - Program Charges | 19% | 15% | 21% | 17% | 18% |
| - Fees & Other | 12% | 19% | 9% | 17% | 13% |
| Total Revenue | 100% | 100% | 100% | 100% | 100% |
| Total Operating Expenditures | | | | | |
| Per Household | | | | | |
| - Regional | 2,035 | 3,478 | 1,160 | 1,720 | 1,572 |
| - Local | 1,455 | 1,637 | 1,780 | 1,645 | 1,430 |
| - Total | 3,490 | 5,115 | 2,940 | 3,365 | 3,002 |
| Percent Waste Diversion | 1.1% | 1.0% | 1.8% | 1.4% | 0.7% |
| Total Debt Per Household | 260 | 789 | 263 | 481 | 738 |
| Debt Charges as a % of Expenditures | 2.3% | 4.3% | 2.1% | 5.2% | 6.7% |
| Total Reserves Per Household | 1,462 | 1,115 | 1,919 | 2,856 | 1,527 |

Source: MARS, 1990, Ministry of Municipal Affairs

- * Metropolitan Toronto is able to undertake much more costly service expenditures while maintaining similar tax levels as other Regions due to its large commercial and industrial tax base (at 47 percent of total property assessment -- Table 4-1) to draw on;
- * The Region of Durham relies more on Provincial Grants (at 23 percent of total revenue -- Table 4-1) than the other GTA Regions, except for Metro (at 24%). This may be partly a result of the Province's funding formulae for general welfare assistance. In Durham social service expenditures are proportionately larger (at 37% of gross expenditures) than elsewhere in the GTA.
- * The Region of York has a lower level of operating expenditures per household (at \$2,940 per household -- Table 4-1) for combined Regional and local service operations than the remainder of the GTA Regions.
- * The Region of Halton maintains the lowest level of per household expenditures for local service operations (\$1,430 -- Table 4-1) and the second lowest for Regional operations (\$1,572).
- * The Regions of Durham and York have the lowest levels of debt (at \$260 and \$263 per household, respectively) of all the GTA Regions. This results in a low debt capacity guideline, as provided by the Ministry of Municipal Affairs. (This excludes debt related to the York-Durham Sewage System which is Provincially operated.)

The debt capacity guideline was previously administered by the Ontario Municipal Board and is now within the auspices of the Ministry of Municipal Affairs. (See Bill 165 An Act to Amend Certain Acts Related to Municipalities - Royal Assent June 25, 1992 and Ontario Regulations 710/92 made under the Municipal Act.) It is defined as debt charges (principal and interest) taken as a percentage of total operating expenditures. For the Regions of Durham and York these ratios have been calculated at 2.3 percent in Durham and 2.1 percent in York (Table 4-1).

- * The Region of Peel has the largest level of reserve funds at \$2,856 per household (Table 4-1) as compared to the other GTA Regions. Among other things these funds are used to finance Blue Box collections and processing.

4.1.1 Comparative Tax Levels

Notwithstanding this diversity, a relatively consistent level of municipal taxation, for local and Regional purposes, excluding schools but including user charges such as water rates, is obtained. In 1990, municipal taxation per household in each of the GTA Regions was:

| | |
|---------------|-------|
| Durham Region | 1,032 |
| Metro | 1,015 |
| York Region | 1,041 |
| Peel Region | 942 |
| Halton Region | 1,059 |

The taxation data, as well as the other factors described above, are summarized on Table 4-1. This data will also be presented graphically in this chapter.

4.1.2 GTA Financial Summary

The following section highlights the above mentioned selected municipal finance information for the GTA Regions. This information is reproduced from Table 4-1 and is drawn from Schedule A, which presents detailed financial summaries for each of the GTA Regions as well as for all the individual area municipalities.

Property Assessment

Property assessment ranges as high as \$240 billion, when expressed on a market value basis, for Metro Toronto to the lowest of \$24 billion in Halton Region. When the relative sizes of the residential versus the commercial/industrial sectors are compared, the data suggests that Halton, Durham and York all are similar, with residential sectors representing about 75 percent of the tax base. Metro Toronto and Peel Region, on the other hand, maintain larger commercial/industrial sectors, at 47 and 33 percent, respectively, with the residential sector making up the remaining difference. This is significant from a taxation point of view, as the residential sector pays taxes at a discounted mill rate (15 percent), while the commercial/industrial sector pays business taxes in addition to property taxes.

Revenue Composition

While the Regions of Halton and York rely most heavily on property taxation (52 percent of revenues) as a funding source, Durham Region and Metro Toronto have the least reliance on taxation (46 percent and 42 percent, respectively). In both cases, the Region of Durham and Metro Toronto rely more on Provincial Grants (23 percent and 24 percent of revenues, respectively). These two regions, along with Peel, also rely on user fees, such as water and sewer billing in Durham (12 percent of revenues) and special purpose fees in Metro (19 percent of revenues) and program revenues in Peel (17% of revenues).

Figure 4-1

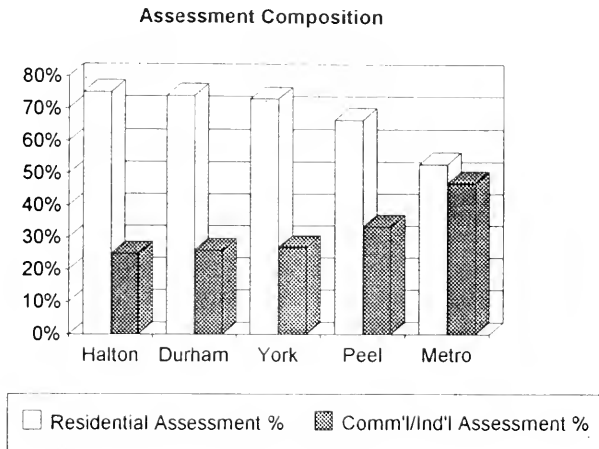
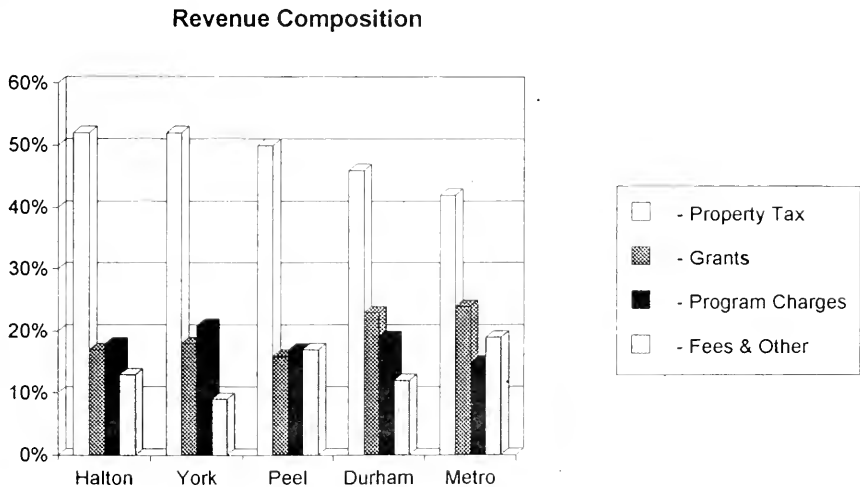


Figure 4-2

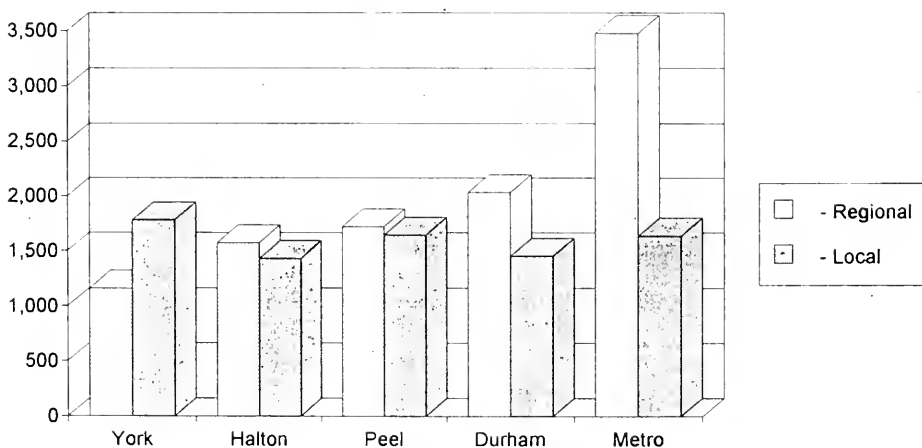


Operating Expenditures

In the GTA, total service expenditures, exceeded \$6.5 billion in 1990. This was composed of: Halton -- \$318 million; York -- \$438 million; Durham -- \$475 million; Peel -- \$754 million; and, Metropolitan Toronto -- \$4.5 billion. When expressed on a per household basis, service expenditures range as high as \$5,115 in Metro for both local and regional purposes to: \$3,490 in Durham Region; \$3,365 in Peel Region; \$3,002 in Halton and \$2,940 in York Region. The relatively high service expenditures in Metro include services that are not provided in the other GTA Regions such as, the TTC, Housing and special event programs.

Figure 4-3

Operating Expenditures Per Household



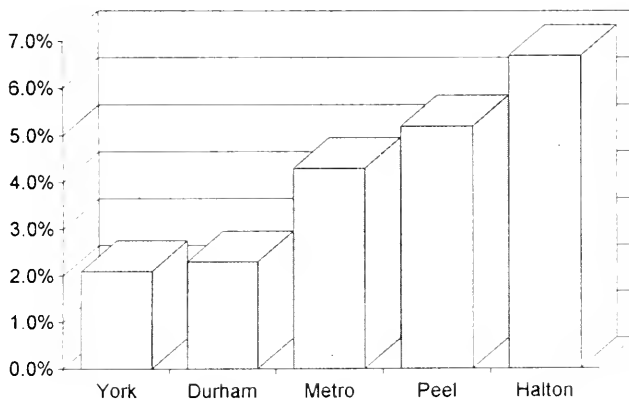
Source: MARS, 1990, Ministry of Municipal Affairs

Debt and Debt Charges

In the GTA, total long term liabilities in 1990 approached \$960 million. This consisted of: Durham \$35 million; York -- \$39 million; Halton -- \$78 million; Peel -- \$108 million; and, Metro -- \$697 million. When expressed on a per household basis, debt per household ranges from \$789 in Metro to \$738 in Halton, \$481 in Peel, \$263 in York and \$260 in Durham. While Halton, Peel and Metro rely more on debenture financing, York and Durham fund more of their capital expenditures directly from the tax levy. As a result of these debt levels, when expressed as a percentage of operating expenditures, debt charges approach 6.7 percent in Halton, 5.2 percent in Peel, 4.3 percent in Metro, 2.3 percent in Durham and 2.1 percent in York.

Figure 4-4

Debt Charges as a Percent of Expenditures



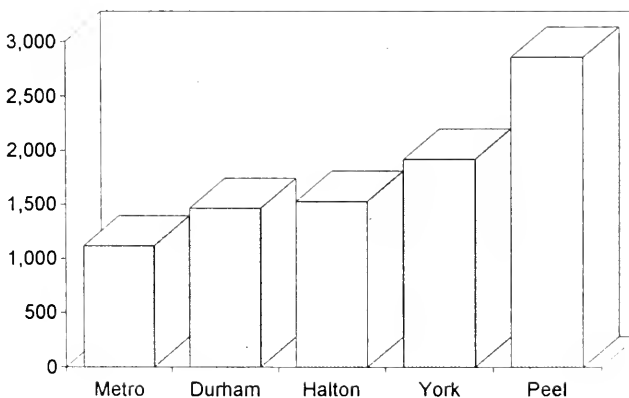
Source: MARS, 1990, Ministry of Municipal Affairs

Reserves and Reserve Funds

Reserves and reserve funds are used for both capital and current operational purposes. In 1990, reserves and reserve funds totalled \$2.2 billion in the GTA. This represented an average of about \$1,800 per household. In each of the Regions reserves totalled \$986 million in Metro, \$640 million in Peel, \$285 million in York, \$199 million in Durham and \$161 million in Halton. Specifically, reserves in each of the Regions approached \$2,856 per household in Peel, \$1,919 per household in York, \$1,527 in Halton, \$1,462 in Durham and \$1,115 in Metro.

Figure 4-5

Reserves Per Household



Source: MARS, 1990, Ministry of Municipal Affairs

4.2 DURHAM REGION

Table 4-3 summarizes the financial profile for Durham Region and its constituent area municipalities. A complete financial profile is presented in Schedule A.

4.2.1 Property Assessment, Tax and Other Revenue

On average, residential assessment in Durham Region in 1990 approached 74 percent of the total tax base, with the commercial/industrial sector representing the remaining 26 percent. This residential/commercial split, however, ranged quite considerably. On the one hand, the City of Oshawa maintained a commercial/industrial sector that represented 41 percent of the tax base. Ajax, Pickering and Whitby maintained commercial/industrial ratios between 20 and 25 percent. In the smaller municipalities, however, the commercial/industrial sectors ranged between 10 and 15 percent of the tax base.

On average, residential property taxes in Durham Region approached \$1,993 per household in 1990. This consisted of \$481.00 for local purposes; \$341.00 per household for the Regional levy; \$210 in direct water charges and, \$960 for school purposes. In 1990, the school portion of property taxes approached 48 percent, with the Regional levy approaching 17 percent and the local levy being 24 percent. While property taxes for Regional and local purposes totalled \$189 million in 1990, 65 percent (\$124 million) was derived from the residential sector with 35 percent (\$65 million) paid by the commercial/industrial sector.

In total in 1990, property taxes represented 46 percent of all of the municipalities revenue sources. Provincial and Federal grants totalled \$117 million in 1990 and this represented 24.7 percent of total revenue. Similarly, program revenue (user charges, water revenues, recreation fees, etc.) totalled \$100 million in 1990 representing 19 percent. On average, non-tax revenues approached \$2,053 per household in Durham Region in 1990.

4.2.2 Operating Expenditures

In total, operating expenditures in the Durham area approached \$476 million in 1990. The Region itself accounted for \$278 million, or 58 percent of total. Regional expenditures primarily related to Social Services -- 102.4 million; Waterworks and Sanitary Sewage -- \$70.9 million; and, Police -\$44.9 million. Local expenditures, on the other hand, primarily related to Road Maintenance and Repair - \$61.8 million; Recreation - \$48.0 million; and, Fire Protection - \$33.8 million.

Waste Management costs in Durham Region (Region and area municipalities) totalled \$29.5 million in 1990. When the 1992 budget figures of \$6.2 million for waste diversion (shown in the previous chapter) are compared, it can be shown that waste diversion represented 21 percent of the Region's 1990 waste management budget. Similarly, waste diversion represented 1.1 percent of the total area's 1990 operating expenditures of \$475 million.

When expressed on a per household basis* Regional expenditures approach \$2,035.00 and local expenditures average \$1,455.00 per household. In total, municipal operating costs exceed \$3,490.00 per household.

4.2.3 Capital Expenditures and Reserves

In 1990, capital expenditures for the Durham area (Region and area municipalities) approached \$137 million and this consisted mainly of Road Maintenance and Repair - \$59.1 million; Water and sewer - \$24.7 million; Recreation - \$29.7 million; General Government - \$7.3 million, Police and Fire Protection - \$6.3 million and other capital costs - \$9.9 million. These capital expenditures were funded from: reserves and reserve funds - 39 percent; general tax revenue 38 percent; Provincial Grants - 14 percent; debenture borrowing - 5 percent and other revenue 4 percent.

Total outstanding debt in the Durham area in 1990 approached \$35.3 million, of which \$21.8 was held by the Region. This represented an average of \$260.00 per household when both the Region and area municipalities are combined. To finance this debt, debt charges in the Durham area total \$10.9 million per year and this represented about \$80.00 per household. When expressed as a percentage of expenditures, which is the Ministry of Municipal Affairs debt capacity guideline, debt charges for the entire Regional area in 1990 represented 2.3 percent.

In 1990, reserve funds totalled 199.3 million for both the Region and the area municipalities. The Region itself maintained \$101.6 million in reserves and reserve funds while the area municipalities maintained \$97.7 million. When combined, these funds represented a 40 percent coverage of annual operating expenditures and, in total, these funds approach \$1,462.00 per household.

TABLE 4.3

DURHAM REGION FINANCIAL PROFILE

| REGION OF DURHAM | RMD | Oshawa | Ajax | Newcastle | Pickering | Whitby | Brock | Scugog | Uxbridge | TOTAL |
|---|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| HOUSEHOLDS | 136,322 | 47,720 | 17,135 | 15,982 | 20,128 | 19,266 | 4,468 | 6,700 | 4,923 | 136,322 |
| ASSESSMENT & TAX | | | | | | | | | | |
| Residential Portion Percentage | 74.2 | 58.9 | 79.6 | 85.1 | 79.6 | 75.6 | 88.2 | 89.3 | 87.2 | 74.2 |
| Commercial/Other Portion Percentage | 25.8 | 41.1 | 20.4 | 14.9 | 20.4 | 24.4 | 11.8 | 10.7 | 12.8 | 25.8 |
| Tax Levy | | | | | | | | | | |
| Average Residential Share of Tax Levy \$ per Household | | | | | | | | | | |
| - Local | 481.03 | | | | | | | | | |
| - Regional | 341.12 | | | | | | | | | |
| - School Board | 961.25 | | | | | | | | | |
| - Direct Charges | 210.00 | | | | | | | | | |
| Total Tax Levy | 1,993.40 | | | | | | | | | |
| REVENUE DISTRIBUTION | | | | | | | | | | |
| Property Tax % | 39.3 | 62.0 | 63.8 | 53.3 | 42.3 | 57.1 | 59.8 | 58.9 | 53.3 | 46.0 |
| Grants % | 29.2 | 15.6 | 9.3 | 18.3 | 26.8 | 15.2 | 22.5 | 22.3 | 18.1 | 24.7 |
| Program & Other % | 23.4 | 7.3 | 15.6 | 18.6 | 17.5 | 15.1 | 7.7 | 9.2 | 15.4 | 19.3 |
| Fees & Service Charges % | 8.1 | 15.2 | 11.3 | 9.8 | 13.4 | 12.6 | 10.1 | 9.6 | 13.1 | 10.0 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Average NonTax Revenue/Household | 1,436.12 | 606.62 | 480.71 | 579.21 | 927.22 | 618.03 | 414.28 | 361.34 | 577.09 | 2,053.23 |
| OPERATING EXPENDITURES | | | | | | | | | | |
| Operating Expenditures (\$000) | 277,513 | 77,259 | 22,425 | 20,628 | 32,621 | 28,367 | 4,835 | 5,986 | 6,082 | 475,716 |
| Per Household \$ Cost | 2,035.72 | 1,619.01 | 1,308.72 | 1,290.70 | 1,620.68 | 1,472.39 | 1,082.14 | 893.43 | 1,235.43 | 3,489.65 |
| Solid Waste Management (\$000) | 22,690 | 1,884 | 729 | 1,701 | 649 | 1,178 | 121 | 341 | 192 | 29,485 |
| Per Household \$ Cost | 166.44 | 39.48 | 42.54 | 106.43 | 32.24 | 61.14 | 27.08 | 50.90 | 39.00 | 216.29 |
| *Net Waste Diversion Budget (\$000) | 5,051 | | | | | | | | | 5,051 |
| Per Household \$ Cost | 37.05 | | | | | | | | | 37.05 |
| % Waste Diversion to Operating Costs | 1.8 | | | | | | | | | 1.1 |
| DEBT | | | | | | | | | | |
| Debt Outstanding (\$000) | 21,840 | 5,683 | 691 | 5,590 | 979 | 408 | 51 | 0 | 51 | 35,293 |
| Per Household \$ Cost | 160.21 | 119.09 | 40.33 | 349.77 | 48.64 | 21.18 | 11.41 | 0.00 | 10.36 | 258.89 |
| Debt Charges (\$000) | 7,634 | 1,302 | 222 | 988 | 392 | 119 | 131 | 63 | 33 | 10,884 |
| Per Household \$ Cost | 56.00 | 27.28 | 12.96 | 61.82 | 19.48 | 6.18 | 29.32 | 9.40 | 6.70 | 79.84 |
| RESERVES/RESERVE FUNDS | | | | | | | | | | |
| Reserves/Reserve Funds (\$000) | 101,633 | 35,766 | 10,262 | 14,327 | 13,409 | 18,471 | 1,820 | 1,705 | 1,909 | 199,302 |
| Per Household \$ Cost | 745.54 | 749.50 | 598.89 | 896.45 | 666.19 | 958.74 | 407.34 | 254.48 | 387.77 | 1,461.99 |
| SOURCE: Ministry of Municipal Affairs – MARS FIR's 1990 *Future Urban Research Budget Analysis | | | | | | | | | | |

4.3 METROPOLITAN TORONTO

4.3.1 Property Assessment, Tax and Other Revenue

On average, residential assessment in Metropolitan Toronto Region in 1990 approached 53 percent of the total tax base, with the commercial/industrial sector representing the remaining 47 percent. This residential/commercial split is relatively consistent throughout Metro except for the smaller municipalities. The City of Toronto maintained the highest commercial ratio in 1990 at 57.9 percent, while Etobicoke, Scarborough, and North York ranged between commercial ratios of 38 to 46 percent. At the same time, York and East York, however, maintained a commercial/industrial sector that represented 27 percent of the tax base.

On average, residential property taxes in Metropolitan Toronto Region approached \$2,167 per household in 1990. This consisted of \$246.00 for local purposes; \$620.00 per household for the Regional levy; \$149.00 for direct water charges, and, \$1,152 for school purposes. In 1990, the school portion of property taxes approached 53 percent, with the Regional levy approaching 29 percent with the local levy being 11 percent. While property taxes for Regional and local purposes totalled \$1.7 billion in 1990, 46 percent (\$804.3 million) was derived from the residential sector with 54 percent (\$922.7 million) paid by the commercial/industrial sector.

In total in 1990, property taxes represented 42 percent of all of the municipalities revenue sources. Provincial and Federal grants totalled \$1.0 billion in 1990 and this represented 24 percent of total revenue. Similarly, program revenue (user charges, water revenues, recreation fees, etc.) totalled \$740.3 million in 1990 and this represented 15 percent. On average, non-tax revenues approached \$3,150.00 per household in Metropolitan Toronto Region in 1990.

4.3.2 Operating Expenditures

In total, operating expenditures in Metropolitan Toronto Region approached \$4.5 billion in 1990. Metro itself accounted for \$3.1 billion, with the area municipalities totalling \$1.4 billion. Metro expenditures primarily related to Social Services -- \$924.5 million; Transportation -- \$867.9 million; Police -- \$523.9 million; and, Waterworks and Sanitary Sewage -- \$194.2 million. Local expenditures, on the other hand, primarily related to Recreation - \$330.7 million; General Government -- \$294.0 million; Fire Protection - \$262.1 million; and, Road Maintenance and Repair - \$222.7 million.

Waste Management costs in Metropolitan Toronto (Region and area municipalities) totalled \$270.9 million in 1990. When the 1992 budget figures of \$50.6 million for waste diversion are compared, it can be shown that waste diversion represented 18 percent of Metro's 1990 waste management budget. Similarly, waste diversion represented 1.0 percent of the total area's 1990 operating expenditures of \$4.5 billion.

When expressed on a per household basis Metro's expenditures approach \$3,478.00 and local expenditures average \$1,637.00 per household. In total, municipal operating costs exceed \$5,115.00 per household.

4.3.3 Capital Expenditures and Reserves

In 1990, capital expenditures for the Metropolitan Toronto area (Region and area municipalities) approached \$796 million and this consisted mainly of Transportation and Road Maintenance - \$271.4 million; Water and sewer - \$126.6 million; General Government - \$86.5 million; Recreation - \$70.2 million; Waste Management - \$59.1 million and, other capital spending -- \$182.2 million. These capital expenditures were funded from: general tax revenue 26 percent; reserves and reserve funds - 26 percent; Provincial Grants - 24 percent; debenture borrowing - 11 percent and other capital financing - 13 percent.

Total outstanding debt in the Metropolitan Toronto area in 1990 approached \$697 million, of which \$430.5 was held by Metro. This represented an average of \$789.00 per household when both the Metro and area municipalities are combined. To finance this debt, debt charges in the Metropolitan Toronto area total \$193.1 million per year and this represented about \$218.00 per household. When expressed as a percentage of expenditures, which is the Ministry of Municipal Affairs debt capacity guideline, debt charges for the entire Regional area in 1990 represented 4.3 percent.

In 1990, reserve funds totalled 986.5 million for both the Metro and the area municipalities. Metro itself maintained \$394.7 million in reserves and reserve funds while the area municipalities maintained \$592 million. When combined, these funds represented a 21 percent coverage of annual operating expenditures and, in total, these funds approach \$1,115.00 per household.

TABLE 4.4

METRO TORONTO FINANCIAL PROFILE

| METRO TORONTO & REGION | Metro | Toronto | Etobicoke | Scarborough | North York | York | East York | TOTAL |
|--|-----------|-----------------|-----------|-------------|------------|----------|-----------|-----------|
| HOUSEHOLDS | 884,421 | 286,218 | 116,467 | 174,530 | 205,989 | 56,266 | 44,951 | 884,421 |
| ASSESSMENT & TAX | | | | | | | | |
| Residential Portion Percentage | 53.1 | 42.1 | 53.8 | 62.2 | 59.2 | 73.3 | 72.8 | 53.1 |
| Commercial/Other Portion Percentage | 46.9 | 57.9 | 46.2 | 37.8 | 40.8 | 26.7 | 27.2 | 46.9 |
| Tax Levy | | | | | | | | |
| Average Residential Share of Tax Levy \$ per Household | | | | | | | | |
| - Local | | 246.04 | | | | | | |
| - Regional | | 620.73 | | | | | | |
| - Direct Charges | | 149.00 | | | | | | |
| - School Board | | 1,151.70 | | | | | | |
| Total Tax Levy | | 2,167.47 | | | | | | |
| REVENUE DISTRIBUTION | | | | | | | | |
| Property Tax % | 37.4 | 49.5 | 49.0 | 50.3 | 48.4 | 54.9 | 55.2 | 41.9 |
| Grants % | 28.9 | 17.7 | 14.4 | 16.9 | 13.6 | 15.9 | 14.8 | 24.2 |
| Program & Other % | 8.8 | 23.9 | 29.8 | 29.0 | 30.0 | 25.4 | 27.0 | 15.4 |
| Fees & Service Charges % | 24.8 | 8.9 | 6.8 | 3.7 | 8.0 | 3.7 | 3.1 | 18.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Non-Tax Revenue (\$000) | 1,907,926 | 369,117 | 110,252 | 140,291 | 196,282 | 35,887 | 26,953 | 2,786,708 |
| Average NonTax Revenue/Household | 2,157.26 | 1,289.64 | 946.64 | 803.82 | 952.88 | 637.81 | 599.61 | 3,150.88 |
| OPERATING EXPENDITURES | | | | | | | | |
| Operating Expenditures (\$000) | 3,075,181 | 637,011 | 167,842 | 227,809 | 301,609 | 66,242 | 48,313 | 4,524,007 |
| Per Household \$ Cost | 3,477.06 | 2,225.61 | 1,441.11 | 1,305.27 | 1,464.20 | 1,177.30 | 1,074.79 | 5,115.22 |
| Solid Waste Management (\$000) | 196,195 | 31,074 | 8,615 | 9,747 | 18,849 | 3,573 | 2,883 | 270,936 |
| Per Household \$ Cost | 221.83 | 108.57 | 73.97 | 55.85 | 91.50 | 63.50 | 64.14 | 306.34 |
| *Net Waste Diversion Budget (\$000) | 20,280 | 8,432 | 1,789 | 8,151 | 3,329 | 717 | 1,536 | 44,234 |
| Per Household \$ Cost | 22.93 | 29.46 | 15.36 | 46.70 | 16.16 | 12.74 | 34.17 | 50.01 |
| % Waste Diversion to Operating Costs | 0.7 | 1.3 | 1.1 | 3.6 | 1.1 | 1.1 | 3.2 | 1.0 |
| DEBT | | | | | | | | |
| Debt Outstanding (\$000) | 430,464 | 133,954 | 43,205 | 13,840 | 36,274 | 15,940 | 23,341 | 697,018 |
| Per Household \$ Cost | 486.72 | 468.01 | 370.96 | 79.30 | 176.10 | 283.30 | 519.25 | 788.11 |
| Debt Charges (\$000) | 127,175 | 32,533 | 9,419 | 5,450 | 9,597 | 4,520 | 4,441 | 193,135 |
| Per Household \$ Cost | 143.79 | 113.67 | 80.87 | 31.23 | 46.59 | 80.33 | 98.80 | 218.37 |
| RESERVES/RESERVE FUNDS | | | | | | | | |
| Reserves/Reserve Funds (\$000) | 394,673 | 298,158 | 50,681 | 113,321 | 106,627 | 12,384 | 10,710 | 986,554 |
| Per Household \$ Cost | 446.25 | 1,041.72 | 435.15 | 649.29 | 517.63 | 220.10 | 238.26 | 1,115.48 |

SOURCE: Ministry of Municipal Affairs -- MARS FIR,s 1990 *Future Urban Research Budget Analysis

4.4 YORK REGION

4.4.1 Property Assessment, Tax and Other Revenue

On average, residential assessment in York Region in 1990 approached 73 percent of the total tax base, with the commercial/industrial sector representing the remaining 27 percent. This residential/commercial split, however, ranged quite considerably. On the one hand, the City of Vaughan maintained a commercial/industrial sector that represented 36 percent of the tax base. Aurora, Markham, Newmarket and Richmond Hill maintained commercial/industrial ratios between 22 and 28 percent. In the smaller municipalities, however, the commercial/industrial sectors ranged between 7 and 16 percent of the tax base.

On average, residential property taxes in York Region approached \$2,958 per household in 1990. This consisted of \$314.00 for local purposes; \$519.00 per household for the Regional levy; \$208.00 in direct water charges and, \$1,917 for school purposes. In 1990, the school portion of property taxes approached 65 percent, with the Regional levy approaching 18 percent with the local levy being 11 percent. While property taxes for Regional and local purposes totalled \$207 million in 1990, 64 percent (\$133.6 million) was derived from the residential sector with 36 percent (\$73.6 million) paid by the commercial/industrial sector.

In total in 1990, property taxes represented 52 percent of all of the municipalities revenue sources. Provincial and Federal grants totalled \$84.7 million in 1990 and this represented 18 percent of total revenue. Similarly, program revenue (user charges, water revenues, recreation fees, etc.) totalled \$100.5 million in 1990 and this represented 21 percent. On average, non-tax revenues approached \$1,561.00 per household in York Region in 1990.

4.4.2 Operating Expenditures

In total, operating expenditures in York Region approached \$438 million in 1990. The Region itself accounted for \$173 million, with the area municipalities totalling \$265 million. Regional expenditures primarily related to Social Services -- \$53.8 million; Police -- \$51.5 million; and, Waterworks and Sanitary Sewage -- \$41.6 million. Local expenditures, on the other hand, primarily related to Recreation - \$66.4 million; Road Maintenance and Repair - \$62.1 million; and, Fire Protection - \$40.2 million.

Waste Management costs in York Region (Region and area municipalities) totalled \$20.8 million in 1990. When the 1992 budget figures of \$10.8 million for waste diversion (shown in the previous chapter) are compared, it can be shown that waste diversion represented 51 percent of the Region's 1990 waste management budget. Similarly, waste diversion

represented 1.8 percent of the total area's 1990 operating expenditures of \$438 million. When expressed on a per household basis Regional expenditures approach \$1,160.00 and local expenditures average \$1,780.00 per household. In total, municipal operating costs exceed \$2,940.00 per household.

4.4.3 Capital Expenditures and Reserves

In 1990, capital expenditures for the York area (Region and area municipalities) approached \$200 million and this consisted mainly of Road Maintenance and Repair - \$69.4 million; Recreation - \$47.7 million; General Government - \$36.4 million; Water and sewer - \$29.3 million and capital costs for other purposes -- \$17.2 million. These capital expenditures were funded from: reserves and reserve funds - 51 percent; debenture borrowing - 22 percent; Provincial Grants - 9 percent; general tax revenue 9 percent and other capital financing - 9 percent.

Total outstanding debt in the York area in 1990 approached \$39.2 million, of which \$14.8 was held by the Region. This represented an average of \$263.00 per household when both the Region and area municipalities are combined. To finance this debt, debt charges in the York area total \$9.2 million per year and this represented about \$62.00 per household. When expressed as a percentage of expenditures, which is the Ministry of Municipal Affairs debt capacity guideline, debt charges for the entire Regional area in 1990 represented 2.1 percent.

In 1990, reserve funds totalled 285.9 million for both the Region and the area municipalities. The Region itself maintained \$91.8 million in reserves and reserve funds while the area municipalities maintained \$194.1 million. When combined, these funds represented a 65 percent coverage of annual operating expenditures and, in total, these funds approach \$1,919.00 per household.

YORK REGION FINANCIAL PROFILE

Table 4-5

| REGION OF YORK | RMY | Aurora | Markham | Newmarket | Richmond Hill | Vaughan | Whitchurch Stouffville | East Gwillimbury | Georgina | King | TOTAL |
|--|----------|----------|----------|-----------|---------------|----------|---------------------------|---------------------|----------|----------|----------|
| HOUSEHOLDS | 149,036 | 9,081 | 42,930 | 13,121 | 24,380 | 29,194 | 6,228 | 5,629 | 12,537 | 5,936 | 149,036 |
| ASSESSMENT & TAX | | | | | | | | | | | |
| Residential Portion Percentage | 73.5 | 76.5 | 71.7 | 76.1 | 77.7 | 63.6 | 83.7 | 91.7 | 89.5 | 92.3 | 73.5 |
| Commercial/Other Portion % | 26.5 | 23.5 | 28.3 | 23.9 | 22.3 | 36.4 | 16.3 | 8.3 | 10.5 | 7.7 | 26.5 |
| Tax Levy | | | | | | | | | | | |
| Average Residential Share of Tax Levy \$ per Household | | | | | | | | | | | |
| - Local | | | | | | | | | | | |
| - Regional | | | | | | | | | | | |
| - Direct Charges | | | | | | | | | | | |
| - School Board | | | | | | | | | | | |
| Total Tax Levy | 2,957.64 | | | | | | | | | | |
| REVENUE DISTRIBUTION | | | | | | | | | | | |
| Property Tax % | 62.9 | 57.5 | 44.8 | 40.1 | 45.0 | 44.6 | 51.9 | 51.5 | 54.1 | 48.9 | 52.0 |
| Grants % | 33.8 | 9.9 | 9.2 | 9.4 | 8.0 | 7.3 | 11.8 | 16.6 | 15.3 | 17.1 | 18.1 |
| Program & Other % | 0.2 | 19.9 | 29.9 | 35.0 | 40.6 | 33.9 | 25.3 | 22.9 | 24.1 | 20.6 | 20.7 |
| Fees & Service Charges & Total | 3.1 | 12.7 | 16.1 | 15.4 | 6.4 | 14.2 | 11.1 | 9.0 | 6.5 | 13.4 | 9.2 |
| | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Non-Tax Revenue (\$000) | 64,907 | 6,475 | 44,746 | 16,083 | 33,951 | 47,706 | 4,386 | 3,469 | 7,268 | 3,675 | 232,666 |
| Average NonTax Revenue \$ per Household | 435.51 | 713.03 | 1,042.30 | 1,225.74 | 1,392.58 | 1,634.10 | 704.24 | 616.27 | 579.72 | 619.10 | 1,561.14 |
| OPERATING EXPENDITURES | | | | | | | | | | | |
| Operating Expenditures (\$000) | 172,648 | 13,436 | 70,521 | 20,008 | 53,928 | 71,280 | 8,468 | 6,228 | 14,265 | 7,262 | 438,044 |
| Per Household \$ Cost | 1,158.43 | 1,479.57 | 1,642.70 | 1,524.88 | 2,211.98 | 2,441.60 | 1,359.67 | 1,106.41 | 1,137.83 | 1,223.38 | 2,939.18 |
| Solid Waste Management (\$000) | 0 | 975 | 5,903 | 2,313 | 2,216 | 5,701 | 873 | 526 | 1,264 | 1,037 | 20,808 |
| Per Household \$ Cost | 0.00 | 107.37 | 137.50 | 176.28 | 90.89 | 195.28 | 140.17 | 93.44 | 100.82 | 174.70 | 139.62 |
| *Net Waste Divert Budget (\$000) | 1,426 | 269 | 1,810 | 686 | 2,100 | 808 | 131 | 172 | 145 | 222 | 7,769 |
| Per Household \$ Cost | 9.57 | 29.62 | 42.16 | 52.28 | 86.14 | 27.68 | 21.03 | 30.56 | 11.57 | 37.40 | 52.13 |
| % Waste Diversion to Operating Costs | 0.8 | 2.0 | 2.6 | 3.4 | 3.9 | 1.1 | 1.5 | 2.8 | 1.0 | 3.1 | 1.8 |
| DEBT | | | | | | | | | | | |
| Debt Outstanding (\$000) | 14,869 | 29 | 4,466 | 2,312 | 6,004 | 4,027 | 1,361 | 468 | 5,639 | 37 | 39,212 |
| Per Household \$ Cost | 99.77 | 3.19 | 104.03 | 176.21 | 246.27 | 137.94 | 218.53 | 83.14 | 449.79 | 6.23 | 263.10 |
| Debt Charges (\$000) | 3,007 | 16 | 1,193 | 715 | 1,744 | 1,038 | 347 | 103 | 985 | 35 | 9,183 |
| Per Household \$ Cost | 20.18 | 1.76 | 27.79 | 54.49 | 71.53 | 35.56 | 55.72 | 18.30 | 78.57 | 5.90 | 61.62 |
| RESERVES/RESERVE FUNDS | | | | | | | | | | | |
| Reserves/Reserve Funds (\$000) | 91,868 | 16,328 | 50,421 | 1,547 | 63,652 | 42,401 | 6,650 | 1,944 | 6,452 | 4,718 | 285,981 |
| Per Household % Cost | 616.41 | 1,798.04 | 1,174.49 | 117.90 | 2,610.83 | 1,452.39 | 1,067.76 | 345.35 | 514.64 | 794.81 | 1,918.87 |

SOURCE: Ministry of Municipal Affairs - MARS FIR's 1990 *Future Urban Research Budget Analysis

4.5 PEEL REGION

Table 4-6 summarizes the financial profile for Peel Region and its constituent area municipalities. A complete financial profile is presented in Schedule A.

4.5.1 Property Assessment, Tax and Other Revenue

On average, residential assessment in Peel Region in 1990 approached 67 percent of the total tax base, with the commercial/industrial sector representing the remaining 33 percent. This residential/commercial split was relatively similar throughout Peel Region, except in Caledon. The City of Mississauga maintained a commercial/industrial sector that represented 35 percent of the tax base, while Brampton's ratio approached 32 percent. Caledon's ratio, on the other hand, approached 14 percent.*

On average, residential property taxes in Peel Region approached \$2,134 per household in 1990. This consisted of \$433.00 for local purposes; \$325.00 per household for the Regional levy; \$184.00 for direct water charges and, \$1,192 for school purposes. In 1990, the school portion of property taxes approached 56 percent, with the Regional levy approaching 15 percent and the local levy being 20 percent. While property taxes for Regional and local purposes totalled \$335 million in 1990, 60 percent (\$202.8 million) was derived from the residential sector with 40 percent (\$131.9 million) paid by the commercial/industrial sector. (This latter ratio is larger than the property assessment ratio for the commercial/industrial sector because this sector also pays business taxes in addition to property taxes.)

In total in 1990, property taxes represented 50 percent of all of the municipalities revenue sources. Provincial and Federal grants totalled \$139 million in 1990 and this represented 16 percent of total revenue. Similarly, program revenue (user charges, water revenues, recreation fees, etc.) totalled \$142.8 million in 1990 and this represented 17 percent. On average, non-tax revenues approached \$1,845 per household in Peel Region in 1990.

4.5.2 Operating Expenditures

In total, operating expenditures in Peel Region approached \$754 million in 1990. The Region itself accounted for \$386 million, with Mississauga totalling \$245 million, Brampton \$108 million and Caledon \$15.6 million. Regional expenditures primarily related to Social Services -- \$104 million; Waterworks and Sanitary Sewage -- \$99.1 million; and, Police - \$97.7 million. Local expenditures, on the other hand, primarily related to Road Maintenance and Repair - \$80.9 million; Recreation - \$76.0 million; and, Fire Protection - \$60.5 million.

Waste Management costs in Peel Region (Region and area municipalities) totalled \$57.5 million in 1990. When the 1992 budget figures of \$12.6 million for waste diversion (shown in the previous chapter) are compared, it can be shown that waste diversion represented 22 percent of the Region's 1990 waste management budget. Similarly, waste diversion represented 1.4 percent of the total area's 1990 operating expenditures of \$754 million.

When expressed on a per household basis Regional expenditures approach \$1,720.00 and local expenditures average \$1,645.00 per household. In total, municipal operating costs exceed \$3,365.00 per household.

4.5.3 Capital Expenditures and Reserves

In 1990, capital expenditures for the Peel area (Region and area municipalities) approached \$258 million and this consisted mainly of Road Maintenance and Repair - \$114.7 million; Recreation - \$50.9 million; Water and sewer - \$39.0 million; General Government - \$25.1 million, Waste Disposal - \$6.0 million and other capital costs -- \$22.3 million. These capital expenditures were funded from: reserves and reserve funds - 67 percent; Provincial Grants - 18 percent; general tax revenue 11 percent and other financing 4%. Debenture financing in 1990 only consisted of \$20,000 and this represents less than one percent of total capital financing.

Total outstanding debt in the Peel area in 1990 approached \$107.8 million, of which \$65.0 was held by the Region. This represented an average of \$481.00 per household when both the Region and area municipalities are combined. To finance this debt, debt charges in the Peel area total \$38.9 million per year and this represented about \$174.00 per household. When expressed as a percentage of expenditures, which is the Ministry of Municipal Affairs debt capacity guideline, debt charges for the entire Regional area in 1990 represented 5.2 percent.

In 1990, reserve funds totalled 640.0 million for both the Region and the area municipalities. The Region itself maintained \$275.6 million in reserves and reserve funds while the area municipalities maintained \$364.4 million. When combined, these funds represented a 80 percent coverage of annual operating expenditures and, in total, these funds approach \$2,856.00 per household.

Table 4-6

PEEL REGION FINANCIAL PROFILE

| REGION OF PEEL | RMP | Brampton | Mississauga | Caledon | TOTAL |
|--|----------|----------|-------------|----------|----------|
| HOUSEHOLDS | 224,092 | 70,195 | 142,738 | 11,159 | 224,092 |
| ASSESSMENT & TAX | | | | | |
| Residential Portion Percentage | 66.6 | 67.7 | 64.7 | 86.4 | 66.6 |
| Commercial/Other Portion Percentage | 33.4 | 32.3 | 35.3 | 13.6 | 33.4 |
| Tax Levy | | | | | |
| Average Residential Share of Tax Levy \$ per Household | | | | | |
| - Local | 433.97 | | | | |
| - Regional | 324.98 | | | | |
| - Direct Charges | 184.00 | | | | |
| - School Board | 1,192.08 | | | | |
| Total Tax Levy | 2,135.03 | | | | |
| REVENUE DISTRIBUTION | | | | | |
| Property Tax % | 48.0 | 58.1 | 50.0 | 65.7 | 50.2 |
| Grants % | 21.8 | 10.1 | 16.6 | 15.9 | 16.8 |
| Program & Other % | 19.3 | 15.7 | 14.6 | 6.8 | 17.2 |
| Fees & Service Charges % | 11.0 | 16.0 | 18.9 | 11.6 | 15.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Non-Tax Revenue (\$000) | 243,323 | 43,878 | 120,949 | 5,241 | 413,391 |
| Average NonTax Revenue/Household | 1,085.82 | 625.09 | 847.35 | 469.67 | 1,844.74 |
| OPERATING EXPENDITURES | | | | | |
| Operating Expenditures (\$000) | 385,619 | 108,095 | 244,922 | 15,607 | 754,243 |
| Per Household \$ Cost | 1,720.81 | 1,539.92 | 1,715.89 | 1,398.60 | 3,365.77 |
| Solid Waste Management (\$000) | 43,860 | 3,877 | 8,809 | 973 | 57,519 |
| Per Household \$ Cost | 195.72 | 55.23 | 61.71 | 87.19 | 256.68 |
| *Net Waste Diversion Budget (\$000) | 1,827 | 3,169 | 5,111 | 561 | 10,668 |
| Per Household \$ Cost | 8.15 | 45.15 | 35.81 | 50.27 | 47.61 |
| % Waste Diversion to Operating Costs | 0.5 | 2.9 | 2.1 | 3.6 | 1.4 |
| DEBT | | | | | |
| Debt Outstanding (\$000) | 65,032 | 36,584 | 5,098 | 1,087 | 107,801 |
| Per Household \$ Cost | 290.20 | 521.18 | 35.72 | 97.41 | 481.06 |
| Debt Charges (\$000) | 25,832 | 9,458 | 3,306 | 355 | 38,951 |
| Per Household \$ Cost | 115.27 | 134.74 | 23.16 | 31.81 | 173.82 |
| RESERVES/RESERVE FUNDS | | | | | |
| Reserves/Reserve Funds (\$000) | 275,651 | 63,373 | 297,548 | 3,491 | 640,063 |
| Per Household \$ Cost | 1,230.08 | 902.81 | 2,084.57 | 312.84 | 2,856.25 |

SOURCE: Ministry of Municipal Affairs -- MARS FIR's 1990 *Future Urban Research Budget Analysis

4.6 HALTON REGION

4.6.1 Property Assessment, Tax and Other Revenue

On average, residential assessment in Halton Region in 1990 approached 75 percent of the total tax base, with the commercial/industrial sector representing the remaining 25 percent. This residential/commercial split was relatively similar throughout Halton Region. The Town of Oakville maintained the largest commercial/industrial sector, at approximately \$2.5 billion in market value, followed closely by Burlington at \$2.2 billion. The Town of Milton's commercial/industrial sector, however, maintained the largest share of the local tax base at 30.1 percent.

On average, residential property taxes in Halton Region approached \$2,207 per household in 1990. This consisted of \$502.00 for local purposes; \$333.00 per household for the Regional levy; \$224.00 in direct water charges and, \$1,148 for school purposes. In 1990, the school portion of property taxes approached 52 percent, with the Regional levy approaching 15 percent, the local levy being 23 percent and direct water billings approached 10 percent. While property taxes for Regional and local purposes totalled \$146 million in 1990, 68 percent (\$99.5 million) was derived from the residential sector with 32 percent (\$46.5 million) paid by the commercial/industrial sector. (This latter ratio is larger than the property assessment ratio for the commercial/industrial sector because this sector also pays business taxes in addition to property taxes.)

In total in 1990, property taxes represented 52 percent of all of the municipalities revenue sources. Provincial and Federal grants totalled \$61 million in 1990 which represented 17 percent of total revenue. Similarly, program revenue (user charges, water revenues, recreation fees, etc.) totalled \$65.5 million in 1990 which represented 18 percent. On average, non-tax revenues approached \$1,633 per household in Halton Region in 1990.

4.6.2 Operating Expenditures

In total, operating expenditures in Halton Region approached \$318 million in 1990. The Region itself accounted for \$167 million, with both Burlington and Oakville exceeding \$60 million. Regional expenditures primarily related to Waterworks and Sanitary Sewage -- \$46.1 million; Social Services - \$43.9 million; and, Police - \$35.7 million. Local expenditures, on the other hand, primarily related to Road Maintenance and Repair - \$49.9 million; Recreation - \$40.8 million; and, Fire Protection - \$24.4 million.

Waste Management costs in Halton Region (Region and area municipalities) totalled \$27.5 million in 1990. When the 1992 budget figures of \$4.4 million for waste diversion (shown

in the previous chapter) are compared, it can be shown that waste diversion represented 20 percent of the Region's 1990 waste management budget. Similarly, waste diversion represented 0.7 percent of the total area's 1990 operating expenditures of \$318 million.

Regional expenditures expressed on a per household basis approach \$1,574.00 and local expenditures average \$1,430.00 per household. In total, municipal operating costs exceed \$3,000.00 per household.

4.6.3 Capital Expenditures and Reserves

In 1990, capital expenditures for the Halton area (Region and area municipalities) approached \$128 million and this consisted primarily of Road Maintenance and Repair - \$44.8 million; Water and sewer - \$24.4 million; Recreation - \$18 million; General Government - \$17.4 million, Waste Disposal - \$16.4 million and other capital costs -- \$7.0 million. Capital expenditures were funded from: reserves and reserve funds - 49 percent; Provincial Grants - 18 percent; general tax revenue 14 percent; debenture borrowing - 12 percent and other revenue 7%.

Total outstanding debt in Halton in 1990 approached \$78.1 million, of which \$52.5 was held by the Region. This represented an average of \$738.00 per household when both the Region and area municipalities were combined. To pay this debt, debt charges in Halton total \$21.2 million per year and this represented about \$200.00 per household. When expressed as a percentage of expenditures, which is the Ministry of Municipal Affairs debt capacity guideline, debt charges for the entire Regional area in 1990 represented 6.7 percent. (A ratio approaching 20 percent is considered high.)

In 1990, reserve funds totalled \$161.8 million for both the Region and the area municipalities. The Region itself maintained \$68.7 million in reserves and reserve funds while the area municipalities maintained \$93.1 million. When combined, these funds represented a 50 percent coverage of annual operating expenditures and, in total, these funds approach \$1,527.00 per household.

Table 4-7

HALTON REGION FINANCIAL PROFILE

| REGION OF HALTON | RMH | Burlington | Halton Hills | Milton | Oakville | TOTAL |
|--|----------|------------|--------------|----------|----------|----------|
| <u>HOUSEHOLDS</u> | 105,943 | 46,332 | 11,857 | 10,129 | 37,625 | 105,943 |
| <u>ASSESSMENT & TAX</u> | | | | | | |
| Residential Portion Percentage | 74.8 | 75.3 | 78.9 | 69.9 | 74.6 | 74.8 |
| Commercial/Other Portion Percentage | 25.2 | 24.7 | 21.1 | 30.1 | 25.4 | 25.2 |
| <u>Tax Levy</u> | | | | | | |
| Average Residential Share of Tax Levy \$ per Household | | | | | | |
| - Local | 502.13 | | | | | |
| - Regional | 333.07 | | | | | |
| - Direct Charges | 224.00 | | | | | |
| - School Board | 1,148.65 | | | | | |
| Total Tax Levy | 2,207.85 | | | | | |
| <u>REVENUE DISTRIBUTION</u> | | | | | | |
| Property Tax % | 47.3 | 57.4 | 59.8 | 56.2 | 58.0 | 51.8 |
| Grants % | 21.1 | 15.5 | 17.3 | 18.4 | 14.1 | 17.1 |
| Program & Other % | 22.3 | 11.5 | 12.1 | 15.6 | 13.7 | 18.3 |
| Fees & Service Charges % | 9.3 | 15.5 | 10.8 | 9.8 | 14.1 | 12.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Non-Tax Revenue (\$000) | 108,590 | 26,955 | 5,782 | 5,572 | 26,163 | 173,062 |
| Average NonTax Revenue/Household | 1,024.99 | 581.78 | 487.64 | 550.10 | 695.36 | 1,633.54 |
| <u>OPERATING EXPENDITURES</u> | | | | | | |
| Operating Expenditures (\$000) | 166,781 | 62,396 | 14,237 | 12,629 | 61,997 | 318,040 |
| Per Household \$ Cost | 1,574.25 | 1,346.72 | 1,200.73 | 1,246.82 | 1,647.76 | 3,001.99 |
| Solid Waste Management (\$000) | 22,489 | 1,721 | 400 | 385 | 2,552 | 27,547 |
| Per Household \$ Cost | 212.27 | 37.14 | 33.74 | 38.01 | 67.83 | 260.02 |
| *Net Waste Diversion Budget (\$000) | 2,263 | | | | | 2,263 |
| Per Household \$ Cost | 21.36 | | | | | 21.36 |
| % Waste Diversion to Operating Costs | 1.4 | | | | | 0.7 |
| <u>DEBT</u> | | | | | | |
| Debt Outstanding (\$000) | 52,596 | 15,588 | 2,811 | 1,115 | 6,038 | 78,148 |
| Per Household \$ Cost | 496.46 | 336.44 | 237.08 | 110.08 | 160.48 | 737.64 |
| Debt Charges (\$000) | 14,873 | 3,958 | 642 | 375 | 1,400 | 21,248 |
| Per Household \$ Cost | 140.39 | 85.43 | 54.15 | 37.02 | 37.21 | 200.56 |
| <u>RESERVES/RESERVE FUNDS</u> | | | | | | |
| Reserves/Reserve Funds (\$000) | 68,677 | 40,010 | 6,289 | 7,340 | 39,484 | 161,800 |
| Per Household \$ Cost | 648.24 | 863.55 | 530.40 | 724.65 | 1,049.41 | 1,527.24 |

SOURCE: Ministry of Municipal Affairs - MARS FIR's 1990 *Future Urban Research Budget Analysis

4.7 FUTURE CAPITAL EXPENDITURES

This section of the report utilizes the future capital costs and obligations of each Region in the GTA, along with the proposed financing structure to enable a comparison of future total capital costs among the GTA Regions. As indicated, the future capital obligations/projections were derived from the capital budgets and forecasts that Future Urban Research received from each of the area municipalities within the GTA except where noted otherwise. Future Urban Research has reviewed the capital budgets and has classified the capital expenditures and financing methods into standard categories for each Region for ease of comparison. The following represents a list of the standard categories for each:

Capital Expenditure Categories

- General Government (administration, finance)
- Protection (fire, police)
- Transportation (roads, parking)
- Environment (water, sewer)
- Health and Social (library, community services)
- Recreation (parks, recreational facilities)
- Planning and Other
- Waste Management (diversion, solid waste)

Capital Financing Categories

- Tax Revenue
- Debentures
- Reserves
- Grants
- Other

Table 4-8 presents a summary of the 1993 to 1997 capital forecasts for the Region's within the GTA. In total the GTA municipalities have identified \$11.3 billion in forecast capital projects to be undertaken during the 1993 through 1997 period. By comparison, the GTA municipalities have identified a total of \$167.8 million in capital projects for waste diversion. This represents 1.5% of the total capital forecast. This capital commitment for diversion activities was described in detail in Chapter 3 of this report.

Table 4-8
1993 - 1997 Capital Forecast and Source of Funding, By Region

| Region | (\$000's) | (%) |
|--------------------------|------------------|------------|
| Durham | | |
| Tax Revenue | 204,000 | 25% |
| Debentures | 130,000 | 16% |
| Reserves | 155,000 | 19% |
| Grants | 211,000 | 26% |
| Other | 114,000 | 14% |
| Total Revenue | 814,000 | 100% |
| Total Expenditure | 814,000 | |
| Metro | | |
| Tax Revenue | 872,000 | 13% |
| Debentures | 1,946,000 | 29% |
| Reserves | 940,000 | 14% |
| Grants | 2,819,000 | 42% |
| Other | 134,000 | 2% |
| Total Revenue | 6,711,000 | 100% |
| Total Expenditure | 6,711,000 | |
| York | | |
| Tax Revenue | 267,000 | 20% |
| Debentures | 200,000 | 15% |
| Reserves | 640,000 | 48% |
| Grants | 133,000 | 10% |
| Other | 93,000 | 7% |
| Total Revenue | 1,333,000 | 100% |
| Total Expenditure | 1,333,000 | |

Table 4-8

1993 - 1997 Capital Forecast and Source of Funding, By Region
(Continued)

| Region | (\$000's) | (%) |
|--------------------------|------------|--------|
| Peel | | |
| Tax Revenue | 187,000 | 11% |
| Debentures | 323,000 | 19% |
| Reserves | 765,000 | 45% |
| Grants | 306,000 | 18% |
| Other | 119,000 | 7% |
| Total Revenue | 1,700,000 | 100% |
| Total Expenditure | 1,700,000 | |
| Halton | | |
| Tax Revenue | 104,000 | 14% |
| Debentures | 215,000 | 29% |
| Reserves | 275,000 | 37% |
| Grants | 149,000 | 20% |
| Other | 0 | 0% |
| Total Revenue | 743,000 | 100% |
| Total Expenditure | 743,000 | |
| Total GTA | 11,301,000 | 100.0% |

Source: 1993 Municipal Capital Budgets

4.7.1 Durham Region

An examination of the Durham Region 1993 Capital Budget and forecast to 1997 as well as an internal report prepared by the Region indicated that an estimated \$814 million has been allocated/proposed for future capital expenditures. Further, approximately \$467 million, or 57.4% of the total, has been allocated by the Region with the area municipalities allocating the remainder (\$347 million). A review of the proposed capital financing indicated approximately 25% would be financed through tax revenue, 16% through debentures, 19% through reserves, 26% through grants and the remainder (14%) through other sources.

By comparison, Durham Region has indicated that \$3.9 million in capital programs will be committed during the 1993 through 1997 period to waste diversion. This diversion commitment represents 0.5% of the proposed capital program.

4.7.2 Metro Toronto

An examination of Metro's 1993 - 1997 Capital Program, and a combination of the 1992 and 1993 capital budgets and forecasts for the six area municipalities indicated that an estimated \$6.7 billion has been allocated/proposed for future capital expenditures. Further, approximately \$4.9 billion, or 74% of the total, has been allocated by the Region with the area municipalities allocating the remainder (\$1.7 billion). Further, approximately 60% of the proposed expenditures would be for transportation.

By comparison, Metro has indicated that \$69.5 million in capital programs will be committed during the 1993 through 1997 period to waste diversion. This diversion commitment, described in detail below, represents 1.0% of the proposed capital program.

In terms of proposed future capital expenditures, Metro and the area municipalities have proposed increases in capital expenditures from either 1992/1993 to 1996/1997. More specifically, Metro has proposed an increase of approximately 20% per annum from 1993 to 1997, Toronto has proposed an increase of 6% per annum from 1993 to 1997, and Scarborough has proposed an increase of 11% per annum from 1993 to 1997, Etobicoke has proposed an increase of 23% per annum from 1992 to 1996. Although, it should be noted that in 1993, East York has proposed major increase in capital expenditures for the construction of a recreational facility.

A review of the proposed capital financing indicated approximately 13% would be financed through tax revenue, 29% through debentures, 14% through reserves, and 42% through grants and 2% from other sources.

4.7.3 York Region

An examination of York Region's 1992 Capital Budget and forecast to 1996, and a combination of the 1992 and 1993 capital budgets and forecasts for the nine area municipalities indicated that an estimated \$1.3 billion has been allocated/proposed for future capital expenditures. Further, approximately \$559 million, or 42% of the total, has been allocated by the Region with the area municipalities allocating the remainder (\$773 million). However, it should be noted that due to the fact that Future Urban Research was unable to obtain the capital forecasts from Markham, Newmarket, Vaughan, Whitchurch/Stouffville, and Georgina the projections for these municipalities were, in the interest of conservatism, kept stable with the latest available year for which we had capital information. According to the Commissioner of Finance for York Region, many of the area municipalities within the Region do not complete capital budgets and forecasts, however this practice is currently under review at the Regional level.

By comparison, York has indicated that \$2.8 million in capital programs will be committed during the 1993 through 1997 period to waste diversion. This diversion commitment, described in detail below, represents 0.2% of the proposed capital program.

A review of the proposed capital financing indicated approximately 20% would be financed through tax revenue, 15% through debentures, 48% through reserves, and 10% through grants and 7% from other sources.

4.7.4 Peel Region

An examination of Peel Region's 1993 Capital Budget and forecast to 1997, and a combination of the 1992 and 1993 capital budgets and forecasts for the three area municipalities indicated that an estimated \$1.7 billion has been allocated/proposed for future capital expenditures. Further, approximately 50% of the total has been allocated by the Region with the area municipalities allocating the remainder. Approximately 70% of the proposed expenditures would be for transportation, 33% for recreation and 21% for waste management.

By comparison, Peel has indicated that \$90.3 million in capital programs will be committed during the 1993 through 1997 period to waste diversion. This diversion commitment, described in detail below, represents 5.3% of the proposed capital program.

In terms of proposed future capital expenditures, the area municipalities have proposed increases in capital expenditures from 1993 to 1997. More specifically, Brampton has proposed an increase of 38.1% per annum from 1993 to 1997, and Caledon has proposed an increase of 63% per annum from 1993 to 1997 and Mississauga has proposed an increase of 7% per annum from 1993 to 1997. The Region has proposed capital

expenditures that when annualized from 1993 to 1997 actually decrease by 6% but this is a result of decrease in proposed expenditures in 1997. In 1994 and 1996, the Region has proposed increases of 43% and 87% respectively from 1993 levels. The proposed increase in expenditures in 1994 and 1996 stem primarily from solid waste and health and social.

A review of the proposed capital financing indicated approximately 11% would be financed through tax revenue, 19% through debentures, 45% through reserves, and 18% through grants and 7% from other sources.

4.7.5 Halton Region

An examination of Halton Region's 1993 Preliminary Rate Supported Budget and the 1993 Preliminary Tax Supported Budget which included the 1994 to 2002 budget forecast, and the various area municipalities 1992 capital budgets and forecasts indicated that an estimated \$743 million has been allocated/proposed for future capital expenditures. Further, approximately \$359 million, or 48.3% of the total, has been allocated by the Region with the area municipalities allocating the remainder (\$384 million). Further, approximately 67% of the proposed expenditures would be for transportation (38%) and the environment (water and sewer, 29%).

By comparison, Halton Region has indicated that \$27.3 million in capital programs will be committed during the 1993 through 1997 period to waste diversion. This diversion commitment, described in detail below, represents 3.7% of the proposed capital program.

In terms of proposed future capital expenditures, the Region and the area municipalities except for Halton Hills and Milton have proposed increases in capital expenditures from either 1992/1993 to 1996/1997. More specifically, the Region has proposed an increase of approximately 5% per annum from 1993 to 1997, Burlington has proposed an increase of 14% per annum from 1992 to 1996, and Oakville has proposed an increase of 1% per annum from 1992 to 1996, while on the other hand Halton Hills and Milton have proposed a decrease in expenditures from 1992 to 1996 of 10% and 1% respectively.

A review of the proposed capital financing indicated approximately 14% would be financed through tax revenue, 29% through debentures, 37% through reserves, and 20% through grants.

4.7.6 Evaluation of the Effects of the Capital Forecast

With a total capital program of \$11.3 billion over the 1993 through 1997 period, the GTA municipalities estimate that they will receive a total of \$4.4 billion, or 39%, in taxes, user fees and reserve funds. The difference, \$6.9 billion (61%) represents debentures, grants and other contributions such as developer fees.

The magnitude of the GTA tax base is such, however, that a capital program of the above size has a medium effect on taxation. Table 4-9 shows that the net residential share of the annual capital cost of the program represents an average per household increase of 19.7% for the whole GTA over the five years of the capital program. If this program were phased annually in equal parts, the average tax increase would be slightly less than 5% per year. In comparison to the 19.8% GTA average, this tax increase ranges as high as 22.3% in both York Region and Metro Toronto to as low as 13.4% in Peel Region.

The procedure used to estimate these tax increases is shown on Table 4-9. It is noted that this procedure does not take into account the retirement of existing debt during the same period, which is particularly difficult to estimate. With this retirement, annual debt payments in the municipalities diminish. Therefore, if this aspect were included in the analysis, tax increases would be less than shown on Table 4-9.

Table 4-9

EFFECT OF FIVE YEAR CAPITAL PROGRAM

| | Households | New Households | Total Future Households |
|--------|------------|-------------------|-------------------------------|
| Halton | 106,420 | 28,930 | 135,350 |
| Durham | 136,135 | 59,710 | 195,845 |
| York | 150,485 | 68,433 | 218,918 |
| Peel | 229,670 | 92,441 | 322,111 |
| Metro | 864,663 | 68,097 | 932,760 |

| | Net Capital Cost (after external funding) | Annual Cost of Program | Residential Share of Annual Costs | \$ |
|--------------|---|------------------------------|---|--------------------|
| Halton | 319,308,110 | 49,754,618 | 60% | 29,852,771 |
| Durham | 333,546,890 | 51,973,306 | 59% | 30,664,251 |
| York | 466,563,650 | 72,699,990 | 70% | 50,889,993 |
| Peel | 510,000,000 | 79,468,246 | 51% | 40,528,805 |
| Metro | 2,818,746,000 | 439,217,255 | 48% | 210,824,282 |
| Total | 4,448,164,650 | 693,113,416 | | 362,760,103 |

| | Residential Costs Per Household | Existing Municipal Taxation | Percent Increase |
|--------------|---------------------------------------|-----------------------------------|---------------------|
| Halton | \$220.56 | \$1,059.00 | 20.8% |
| Durham | \$156.57 | \$1,032.00 | 15.2% |
| York | \$232.46 | \$1,041.00 | 22.3% |
| Peel | \$125.82 | \$942.00 | 13.4% |
| Metro | \$226.02 | \$1,015.00 | 22.3% |
| Total | \$200.98 | \$1,017.80 | 19.7% |

Source: Future Urban Research
caresshr.xls

5.0 ASSESSMENT AND EVALUATION OF THE 3R's SYSTEM

5.1 OVERVIEW AND APPROACH

To examine the effects of the seven diversion system alternatives, the criteria and indicators originally developed in the initial stages of the study were used. These are listed as follows.

Potential Impact on Local Taxpayers

- Total Increase in Net General Municipal Levy
- Net General Municipal Levy, adjusted for commercial/industrial property assessment, expressed on per household basis

Potential for Impact on the Debt Burden on the Municipality

- Amount of Debenture Debt
- Annual Debt Payments as a Percentage of Expenditures
- Available Debt Capacity
(Former OMB/MMA guideline)

Potential Impact on Municipal Reserve Funds

- Total Amount of Reserve Funds
- Reserves per Household
- Reserves as a Percentage of Operating Expenditures

Potential for Impact on the Level of Municipal Service

- Total Municipal Wages, Salaries, Materials & Contract Expenditures per household
- Current Expenditures by Department per Household

Potential for Impact on the Provincial Treasury

- Amount of Provincial Funding

During the course of this study, however, it was found that reliance on this criteria had to be lessened. Due to budget and social contract considerations, the

amount of grant funding beyond the current Provincial fiscal year is uncertain. In the extreme, the Province may find it necessary to address the funding assistance of each 3R's alternative examined in this study on a case-by-case basis. Due to this, evaluations under this criteria became indeterminate. Actual resolution may possibly depend on actual funding negotiations with each Region.

Potential for Impact on Private Sector Industries

Amount of Private Sector Funding
Amount of Private Sector Costs
Amount of Costs Passed on Through Higher Prices
Amount of Private Sector Costs Financed Through Taxes,
Incentives, Economies, Etc.

The detailed effects analysis follows. Throughout this discussion, the alternatives are ranked. Those accorded the highest ranking had the lowest impact and those given the lowest rankings had the highest impacts.

Each technical appendix for the other study components were prepared, reviewed and revised concurrently. As a result, some revised information contained in the technical appendices reporting on alternative system cost and service (tonnage and diversion rates) is not wholly incorporated into this document. These revisions mostly represent minor differences in figures and should not significantly affect the result of this analysis. These revised information items will be incorporated into this municipal finance technical appendix when it is finalized after the public consultation stage of the EA process.

5.2 REGION OF DURHAM

Each of the system alternatives for the Region of Durham have been described in the Environmental Assessment document prepared by M.M. Dillon Limited, Consulting Engineers and Planners. There are, however, specific cost and revenue elements associated with each of the diversion alternatives. From a financial perspective, each system can be summarized as follows:

- a) Existing System: As described in the previously presented baseline documentation and system descriptions, this system does not include added costs or revenues beyond those that are already in place.
- b) Committed System: This system includes new capital or program items that would potentially change existing financing requirements. These are programs that have been identified as committed within the five year capital budgets. More specifically, the alternatives presented only include expenditures that could potentially increase the amount of tonnage diverted, therefore inflation increases to existing budget items have not been included. In total, Durham region is expected to incur \$3.9 million in capital

expenditures over the next five years.

- c) Direct Cost: This system would charge for the amount of garbage placed curbside. This suggests that Durham Region would have two options for charging for waste collection. Under a revenue neutral approach, no additional revenue would be charged for waste and diversion collection purposes from the home owners beyond what is now collected via municipal taxes. That is, added direct cost revenue would be netted from collection costs before household tax rates are determined.

Under an additional revenue direct cost system, garbage bag charges would be levied in addition to normal property taxes that include waste diversion and disposal collection costs. This extra revenue, while representing an added charge to the homeowner, would then be available to the Region to assist in financing other diversion and waste management activities. In this analysis, it was assumed that these added charges would yield approximately \$3.5 million per year to Durham Region. This approaches \$25 per household.

- d) Expanded Blue Box: Includes an additional cost of \$9.0 million for the construction of a new MRF or a further expansion to the existing MRF.
- e) Wet/Dry: This system would include significant capital costs, including:
- \$9.0 million for a new MRF or a further expansion to the existing MRF
 - \$25.0 million for a new central in-vessel composting facility with a capacity of 50,000 tonnes
 - \$11.0 million to provide roll-out carts to 110,000 households
 - \$8.3 million for 56 new trucks

In the analysis, it is assumed that half of the cost of the trucks and roll-out carts is included in diversion budgets with the other half being debentured. This is done to recognize that to establish a wet/dry system a staging strategy will be necessary. In this way, the system will be phased over time and trucks will be replaced gradually as exiting vehicles wear out.

- f) Mixed Waste: This system would require a \$50.0 million expenditure for a mixed waste plant with a capacity of 112,000 tonnes per year (430 tonnes per day).

5.2.1 Potential Impact on Local Taxpayers

The following describes the net system effects on the local taxpayers. Table 5.2.1 shows that, when all elements are considered, gross costs in Durham Region may range from the existing level of \$5.1 million per year to \$20.8 million per year for the mixed waste systems. Moreover,

while the committed expansion program may present an annual operating cost of \$5.7 million per year, the direct cost/revenue neutral system may approach \$9.2 million per year, with a direct cost /added revenue system approaching \$12.7 million in annual levy costs.

Table 5.2.1

Cost of Alternative Diversion Systems
Net Annual Diversion Costs -- General Levy

| System | Gross Costs | Net of Disposal Costs |
|---------------------------------|-------------|-----------------------|
| Existing System | \$5,091,865 | \$2,094,865 |
| Committed Program | 5,716,692 | 2,608,692 |
| Direct Cost (Revenue Neutral) A | 9,208,381 | 2,008,381 |
| Direct Cost (Added Revenue) B | 12,711,435 | 5,511,435 |
| Expanded Blue Box | 11,696,534 | 3,746,534 |
| Wet / Dry | 17,845,746 | 8,245,746 |
| Mixed Waste (Low Diversion) A | 20,784,455 | 10,434,455 |
| Mixed Waste (High Diversion) B | 20,784,455 | 6,984,455 |

Source: Future Urban Research

When these costs are offset with the savings gained by diverting waste from disposal and landfill, costs decline considerably. In this analysis, it is assumed that overall disposal costs approach \$100 per tonne. This represents \$60 per tonne in collection costs, which is determined from Durham Region's historical experience, and \$40 per tonne disposal costs. This latter amount is an empirically determined rate using waste management practices in Ontario and does not represent Metro's current \$90 per tonne amount charged to Durham. Since the Metro landfill arrangement will not exist when the selected diversion alternative is put in place, a rate that more closely approaches actual processing costs has been used. (This is tested in the sensitivity analysis shown below.) With this recognition of the treatment of disposal costs, net diversion system costs are also shown on Table 5.2.1. These range from \$2,008,381 million from both the direct cost/revenue neutral system and the existing system to \$10,434,455 million for a mixed waste/low diversion system.

The household cost of diversion can also be compared to the level of municipal taxation paid in Durham Region. Table 5.2.2 shows that diversion activities currently represent \$9.00 per household, or 1% of total municipal taxes of \$1,032.00 per household (excluding school taxes). To estimate the future effects of the diversion alternatives on a household basis, the analysis

includes household growth estimates for Durham. This is included to capture the future effect of an increasing tax base.

While household costs range between \$9.00 and \$33.00 for the various alternatives, the committed system (\$11.00), the direct cost/revenue neutral system (\$9.00) and the expanded Blue Box system (\$14.00) all represent about 1% of household taxes. Moreover, the direct cost/added revenue system (\$19.00 per household) and the mixed waste/high diversion system (\$23.00 per household) represent 2% of current average household taxes. The remaining systems, wet/dry and mixed waste/low diversion, both approach 3% of average household taxes.

To estimate the effect of the system, a cost per household guideline was utilized. Cost increases that ranged from 0% to 3% of household taxes were considered to have a low effect, while cost increases of 4% to 6% were considered to have a medium effect, and cost increases above 7% were considered to be high.

Table 5.2.2
Percent of Diversion Costs to
Household Municipal Taxes

| System | Current Total Municipal Taxation Per Household | Cost of Diversion Per Household | Percent Increase in Household Taxation |
|------------------------------------|---|------------------------------------|--|
| Existing | 1,032.00 | \$9.00 | 1% |
| Committed | 1,032.00 | 11.00 | 1% |
| Direct Cost (Revenue Neutral) A | 1,032.00 | 9.00 | 1% |
| Direct Cost (Added Revenue) B | 1,032.00 | 19.00 | 2% |
| Expanded Blue Box | 1,032.00 | 14.00 | 1% |
| Wet/Dry | 1,032.00 | 27.00 | 3% |
| Mixed Waste (Low Diversion) A | 1,032.00 | 33.00 | 3% |
| Mixed Waste (High Diversion) B | 1,032.00 | 23.00 | 2% |

Source: Future Urban Research

5.2.2 Potential Impact on the Debt Burden of the Municipalities

The effects of the diversion commitment on the municipal capital programs is more significant than the tax impact. In this analysis, it is assumed that the full capital cost of future diversion commitments are annualized at 9% for a 10 year period. The effect of increasing the existing debt position in Durham Region due to each alternative is shown on Table 5.2.3. Since both mixed waste alternatives have the largest capital program, these systems significantly affect Durham Region's associated debt burden. Conversely, since the committed program, the direct cost and expanded Blue Box systems have the lower capital requirements, Durham Region's debt burden is affected the least in these alternatives.

Table 5.2.3

**Capital Costs Related to
the Diversion Alternatives**

| System | Total Existing Debt (\$000) | Total Diversion Debt (\$000) | Percent Increase |
|------------------------------------|-----------------------------------|------------------------------------|---------------------|
| Existing | \$35,293 | 0 | 0% |
| Committed | 35,293 | 3,856 | 11% |
| Direct Cost (Revenue Neutral) A | 35,293 | 3,856 | 11% |
| Direct Cost (Added Revenue) B | 35,293 | 3,856 | 11% |
| Expanded Blue Box | 35,293 | 9,000 | 26% |
| Wet/Dry | 35,293 | 39,500 | 112% |
| Mixed Waste (Low Diversion) A | 35,293 | 50,000 | 142% |
| Mixed Waste (High Diversion) B | 35,293 | 50,000 | 142% |

Source: Future Urban Research

When examining Durham Region's existing debt charge position, that is, the comparison of debt payments (including principal and interest) to operating expenditures, debt charges represented 2.3% of costs. The future diversion alternatives have the effect of changing these ratios for all systems. With the committed and direct cost the percentage of debt charges to expenditures may increase to 2.4%, while the expanded Blue Box's ratio may increase to 2.6%. With the wet/dry and mixed waste systems, debt charges may increase to 3.6% and 3.9% respectively. This is shown in Table 5.2.4.

**Effect of Diversion Costs on
Municipal Debt Charges**

Table 5.2.4

| System | Existing Debt Charges as a Percent of Expenditures | Future Debt Charges as a Percent of Expenditures |
|---------------------------------|--|--|
| Existing | 2.3% | 2.3% |
| Committed | 2.3% | 2.4% |
| Direct Cost (Revenue Neutral) A | 2.3% | 2.4% |
| Direct Cost (Added Revenue) B | 2.3% | 2.4% |
| Expanded Blue Box | 2.3% | 2.6% |
| Wet/Dry | 2.3% | 3.6% |
| Mixed Waste (Low Diversion) A | 2.3% | 3.9% |
| Mixed Waste (High Diversion) B | 2.3% | 3.9% |

Source: Future Urban Research

Similar to the ratio of debt charges to operating expenditures, debt capacity calculations determine the amount of available debt permitted by the Ministry of Municipal Affairs (former OMB guideline). When estimating debt capacity, using a 9% interest rate and a ten year term, the total debt capacity for Durham Region approached \$370 million (Table 6.2.5). Similar to the previous analysis, the low capital cost system alternatives have relatively minor effect in reducing the Region's debt capacity. When compared to the current 90% level of remaining capacity, the committed program (89%), the direct cost systems (89%) and expanded Blue Box (88%) do not absorb a significant amount of remaining debt capacity. The wet/dry system and the mixed waste systems, however, absorb large amounts of debt capacity, leaving Durham with 80% and 77% respectively.

Table 5.2.5

**Effect of Diversion Costs
on Debt Capacity**

| System | Total Available Debt Capacity (\$000) | Current Remaining Debt Capacity (\$000) | Total Diversion Debt (\$000) | Percent Capacity Remaining |
|---------------------------------------|---|---|---------------------------------------|----------------------------------|
| Existing | \$370,074 | \$334,781 | 0 | 90% |
| Committed | 370,074 | 334,781 | 3,856 | 89% |
| Direct Cost (Revenue Neutral) A | 370,074 | 334,781 | 3,856 | 89% |
| Direct Cost (Added Revenue) B | 370,074 | 334,781 | 3,856 | 89% |
| Expanded Blue Box | 370,074 | 334,781 | 9,000 | 88% |
| Wet/Dry | 370,074 | 334,781 | 39,500 | 80% |
| Mixed Waste (Low Diversion) A | 370,074 | 334,781 | 50,000 | 77% |
| Mixed Waste (High Diversion) B | 370,074 | 334,781 | 50,000 | 77% |

Source: Future Urban Research

5.2.3 Potential Impact on Municipal Reserve Funds

It was shown under the system descriptions that the direct cost/added revenue system had the capacity of generating a further \$1.5 million in extra revenue that could have been placed into reserves and used for other waste management/waste diversion activities.

5.2.4 Potential Impact on the Level of Municipal Services

Similar to the evaluation of reserve funds, the annualized cost effect of the diversion systems has a relatively nominal impact on household taxation. Therefore, no reductions in the delivery of services for other municipal departments is necessary to fund diversion costs. Therefore, there would be no impact on the functional service levels in the municipalities.

5.2.5 Potential Impact on the Provincial Treasury

The above analysis is presented in the absence of mitigation. During the course of this study, it was found that reliance on this criteria had to be lessened. Due to budget and social contract considerations, the amount of grant funding beyond the current Provincial fiscal year is uncertain. In the extreme, the Province may find it necessary to address the funding assistance of each 3R's alternative examined in this study on a case-by-case basis. Due to this, evaluations under this criteria became indeterminate. Actual resolution may possibly depend on actual funding negotiations with each Region.

Notwithstanding this, and pending funding arrangements with Durham Region, it could be assumed that 30% of the capital costs of the alternative systems could be funded externally. While the primary source of funds may be Provincial grants, the analysis does not exclude the possibility of other private funding sources. If this were the case, the alternative systems in Durham may be funded as follows:

| | |
|-------------------|---------------|
| Existing | 0 |
| Committed | \$1.3 million |
| Direct Cost A | 1.3 million |
| Direct Cost B | 1.3 million |
| Expanded Blue Box | 3.0 million |
| Wet/Dry | 13.6 million |
| Mixed Waste A | 17.7 million |
| Mixed Waste B | 17.7 million |

5.2.6 Potential Impact on Private Sector Industries

Assuming the continuation of existing municipal funding mechanisms, the effects analysis does not consider any direct impacts to the private sector to offset costs related to the diversion commitment (apart from a possible mitigation scenario shown as part of the Impact on the Provincial Treasury). However, there is an indirect taxation effect, whereby a portion of the diversion costs are levied in local taxes.

Table 5.2.6
System Effects on Business Taxes

| System | Total Existing Business Taxes (\$000) | Total Added Taxes Due To Diversion (\$000) | Percent Increase |
|------------------------------------|---|---|---------------------|
| Existing | \$57,271 | \$859 | 1% |
| Committed | 57,271 | 1,070 | 2% |
| Direct Cost (Revenue Neutral) A | 57,271 | 823 | 1% |
| Direct Cost (Added Revenue) B | 57,271 | 2,260 | 1% |
| Expanded Blue Box | 57,271 | 1,536 | 3% |
| Wet/Dry | 57,271 | 3,381 | 6% |
| Mixed Waste (Low Diversion) A | 57,271 | 4,278 | 7% |
| Mixed Waste (High Diversion) B | 57,271 | 2,864 | 5% |

Source: Future Urban Research

Table 5.2.6 shows the level of private sector taxation in Durham for each diversion system. While taxes currently collected from the business sector now approach \$57 million, tax charges for each system range from 1% for existing and direct cost systems (added revenue bag charges are only residually related) to 6% and 7% for wet/dry and mixed waste (low diversion) systems.

5.2.7 Summary of Effects Analysis

The following table summarizes the effects by criteria and indicator for Durham Region. The system alternatives were first ranked by the criteria and indicators within the Municipal Finance group. The net effects are summarized on Table 5.2.7. The criteria themselves are not ranked in terms of order of importance. All criteria maintain an equal weighting because no one criteria is viewed to carry more weight, or be of more significance than others. By considering the relative magnitude of the effects for each of the criteria and indicators, an overall systems ranking can be completed for Municipal Finance. This is also summarized on Table 5.2.7.

The highest ranked systems are the existing system and the direct cost systems. The existing system represents the least cost to the tax payers in Durham and does not present any debt costs. While the direct cost systems represent very different revenue strategies the ranking indicates the system's relative merits. On the one hand, the direct cost/revenue neutral system imposes a low cost per household and does not require a significant amount of capital costs. On the other hand, while the direct cost/added revenue system similarly does not represent a significant capital cost, it imposes an additional cost to the tax payers. This revenue, however, represents an addition to Durham Region's reserves. Therefore, these funds are then available to assist in further waste management financing for other needed projects. As such, these added funds would be returned to Durham's tax payers in the future. Since these added charges, however, are collected as a fee for waste management, it is suggested that the funds be used only for waste management purposes and not to decrease general levy requirements for other municipal services.

Following these highest ranked systems, the committed program and the expanded Blue Box systems are second and third highest ranked as the tax requirements and debt burdens do not represent significant effects.

The mixed waste/low diversion system is the lowest ranked system because it represents the highest tax effects and also carries the highest capital cost. Similarly, while less burdensome, the mixed waste/high diversion and the wet/dry systems also represent lower ranked systems.

Table 6.2.7

SYSTEM NET EFFECTS TABLE BY INDICATOR

DURHAM

| | Existing | Committed | Direct Cost A | Direct Cost B | Expanded Blue Box | Wet/Dry | Mixed Waste a | Mixed Waste b |
|--------------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| | 1 | 4 | 1 | 1 | 6 | 8 | 7 | |
| Overall Rank | Highest Ranked | Second Highest Ranked | Highest Ranked | Highest Ranked | Third Highest Ranked | Third Lowest Ranked | Lowest Ranked | Second Lowest Ranked |
| Impact on Local Taxpayers | 1 | 3 | 1 | 5 | 7 | 8 | 6 | |
| Tax Levy | 2,094,865 | 2,608,692 | 2,008,381 | 5,511,435 | 3,746,534 | 8,245,746 | 10,434,455 | 6,984,455 |
| Tax Per Household | 9 | 11 | 9 | 13 | 14 | 27 | 33 | 23 |
| | 1% | 1% | 1% | 2% | 1% | 3% | 3% | 2% |
| Impact on Municipal Debt Burden | 1 | 2 | 2 | 4 | 6 | 8 | 8 | |
| Amount of Debt | 0 | 3,656 | 3,656 | 3,656 | 9,000 | 39,500 | 50,000 | 50,000 |
| Debt Payments | 0 | 601 | 601 | 604 | 1,402 | 6,155 | 7,791 | 7,791 |
| Debt Capacity | 90 | 89 | 89 | 89 | 88 | 80 | 77 | 77 |
| Impact on Municipal Reserves | 8 | 8 | 1 | 8 | 8 | 8 | 8 | |
| Total Reserves | 0 | 0 | 0 | 1,500,000 | 0 | 0 | 0 | 0 |
| Reserves/Household | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 |
| Reserves/Expenses | 0 | 0 | 0 | 3% | 0 | 0 | 0 | 0 |
| Impact on Municipal Level of Service | | | | | | | | |
| Operating Cost | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Expense/Household | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Impact on Provincial Treasury | | | | | | | | |
| pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements |
| Impact on Private Sector Industries | 1 | 1 | 1 | 5 | 7 | 8 | 5 | |
| Private Funding | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Costs | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Higher Prices | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Private Taxes | 1% | 2% | 1% | 1% | 3% | 6% | 7% | 5% |

5.2.8 SENSITIVITY ANALYSIS

To confirm this ranking, the municipal finance component also undertook a sensitivity analysis on the key variables that may affect the criteria and indicators. The sensitivity analysis examined variations in capital costs (plus or minus 10% and 20%), rates of waste diversion (plus or minus 5%), variations in operating cost (plus or minus 5% and 10%) differences in waste disposal costs per tonne including the rate the Metro currently charges Durham Region for solid waste disposal and, finally, household growth including a no growth scenario. While changing the value of the indicators shown above, the sensitivity analysis shows that, given the ranges tested, the general ranking of the systems shown above would not significantly change.

SENSITIVITY ANALYSIS
DURHAM

Table 5.2.8

| | Existing | Committed | Direct Cost A | Direct Cost B | Expanded | Wet/Dry | Mixed a | Mixed b |
|------------------|----------|-----------|---|------------------|----------|---------|---------|---------|
| Net Annual Costs | 2,095 | 2,609 | 2,008 | 5,511 | 3,747 | 8,246 | 10,434 | 6,984 |
| Capital Costs | | | | | | | | |
| 10% | 2,095 | 2,669 | 2,068 | 5,571 | 3,887 | 8,861 | 11,214 | 7,764 |
| 20% | 2,095 | 2,729 | 2,129 | 5,632 | 4,027 | 9,477 | 11,992 | 8,542 |
| -10% | 2,095 | 2,549 | 1,948 | 5,451 | 3,606 | 7,630 | 9,655 | 6,205 |
| -20% | 2,095 | 2,488 | 1,888 | 5,391 | 3,466 | 7,014 | 8,876 | 5,426 |
| | | | no change in ranking | | | | | |
| Diversion Rate | | | | | | | | |
| 5% n/a | n/a | | 1,258 | 4,761 | 2,996 | 7,496 | 9,684 | 6,284 |
| -5% n/a | n/a | | 2,758 | 6,261 | 4,496 | 8,996 | 11,184 | 7,734 |
| | | | -5% favours direct cost A | | | | | |
| Operating Cost | | | | | | | | |
| 5% | 2,095 | 2,864 | 2,418 | 5,442 | 4,236 | 8,802 | 11,053 | 7,603 |
| 10% | 2,095 | 3,120 | 2,828 | 6,372 | 4,726 | 9,359 | 11,672 | 8,222 |
| -5% | 2,095 | 2,609 | 1,598 | 5,081 | 3,256 | 7,689 | 9,816 | 6,366 |
| | | | more cost favours existing | | | | | |
| | | | less cost favours direct cost A | | | | | |
| Cost Per Tonne | | | | | | | | |
| + \$40 | 896 | 1,365 | -871 | 2,631 | 566 | 4,406 | 6,294 | 1,464 |
| 20 | 1,495 | 1,987 | 568 | 4,071 | 2,156 | 6,326 | 8,364 | 4,224 |
| | | | higher disposal fees favour direct cost a and mixed waste b | | | | | |
| Household Growth | | | | | | | | |
| analysis | 1% | 1% | 1% | 2% | 1% | 3% | 3% | 2% |
| no growth | 1% | 2% | 1% | 3% | 2% | 4% | 5% | 3% |
| | | | no growth favours existing & direct cost a | | | | | |

Source: Future Urban Research

5.3 METROPOLITAN TORONTO

While each of the system alternatives for Metropolitan Toronto have been previously described in the Environmental Assessment document prepared by M.M. Dillon Limited Consulting Engineers and Planners, there are specific cost and revenue elements associated with each of the diversion alternatives which are summarized from a financial perspective below.

- a) Existing System: As described in the previously presented baseline documentation and system descriptions, this system does not include additional costs or revenues beyond those that are already in place.
- b) Committed System: This system includes new capital or program items that would potentially change existing financing requirements. These are programs that have been identified as committed within the five year capital budgets. More specifically, the alternatives presented only include expenditures that could potentially increase the amount of tonnage diverted, therefore inflation increases to existing budget items have not been included.

In total, Metro Region is expected to incur \$69.9 million in capital expenditures over the next five years (1993 to 1997). The review of Metro's 1993 Capital and Operating Budgets and five year forecast for Waste Diversion indicated that an additional \$70.4 million will continue after 1997 and this brings the total committed program to \$140.3 million.

- c) Direct Cost: This system would charge for the amount of waste placed curbside. This suggests that Metro Region would have two options for charging for waste collection. Under a revenue neutral approach, no additional revenue would be charged for waste and diversion collection purposes from the home owners beyond what is now collected via municipal taxes. That is, added direct cost revenue would be netted from collection costs before household tax rates are determined.

Under an additional revenue direct cost system, garbage bag charges would be levied in addition to normal property taxes that include waste diversion and disposal collection costs. The extra revenue, while representing an added charge to the homeowner, would then be available to the Region to assist in financing other diversion and waste management activities. This analysis assumed that the added charges would yield approximately \$45.0 million per year to Metro Region. This approaches \$50 per household.

- d) Expanded Blue Box: The committed system in Metro would likely be able to handle

the expanded Blue Box, after the new MRF is constructed. The total program is therefore the same as the committed program.

- e) Wet/Dry: This system would include two additional capital costs to the costs identified in the committed system, these include:
- \$40.0 million to provide roll-out carts to 400,000 single family households and similar other households
 - \$22.2 million for 148 new trucks

The analysis assumed that half of the cost of the trucks and roll-out carts would be included in diversion budgets with the other half being debentured. This recognizes the fact that to establish a wet/dry system a staging strategy would be necessary. Therefore, the system would be phased over time and trucks would be replaced gradually as exiting vehicles wear out.

- f) Mixed Waste: This system would require an \$200.0 to \$250.0 million expenditure for a mixed waste plant (with capacity of 900,000 tonnes per year).

5.3.1 Potential Impact on Local Taxpayers

The following describes the net system effects on the local taxpayers. Table 5.3.1 indicates that, when all elements are considered, gross costs in Metro Region may range from the existing level of \$44.2 million per year to \$217.8 million per year for the mixed waste system. Further, while the committed expansion program may present a gross annual operating cost of \$67.0 million per year, the direct cost/neutral revenue system may approach \$107.1 million per year, with a direct cost/added revenue system approaching \$152.1 million in annual levy costs.

However, when these costs are offset with the savings gained by diverting waste from disposal and landfill, the costs decline. This analysis assumed that overall disposal costs approach \$100 per tonne. This represents \$60 per tonne in collection costs and \$40 per tonne in disposal costs. This latter amount is an empirically determined rate using waste management practices in Ontario and does not represent Metro's current \$90 per tonne amount charged at the landfill. Since the IWA may be in operation when the selected diversion alternative is put in place, a rate that more closely approaches actual processing costs has been used. (This is tested in the sensitivity analysis shown below.)

The household cost of diversion can also be compared to the level of municipal taxation paid in Metro Region. Table 5.3.2 shows that diversion activities currently represent \$13.00 per household, or 1% of total municipal taxes of \$1,016.00 per household per year (excluding school taxes). To estimate the future effects of the diversion alternatives on a household basis, the analysis included household growth estimates for Metro. This was included to capture the effect of an increasing tax base.

Table 5.3.1
Cost of Alternative Diversion Systems
Net Annual Diversion Costs -- General Levy

| | Gross Costs | Net of Disposal Costs |
|---------------------------------|--------------|-----------------------|
| Existing System | \$44,234,742 | \$23,747,137 |
| Committed Program | 67,044,790 | 42,362,618 |
| Direct Cost (Revenue Neutral) A | 107,137,950 | 57,773,605 |
| Direct Cost (Added Revenue) B | 152,137,950 | 102,773,605 |
| Expanded Blue Box | 115,734,042 | 59,317,648 |
| Wet / Dry | 116,182,741 | 43,311,565 |
| Mixed Waste (Low Diversion) A | 213,293,159 | 138,071,300 |
| Mixed Waste (High Diversion) B | 217,188,661 | 116,109,288 |

Source: Future Urban Research

To estimate the effect of the system, a cost per household guideline was utilized. Cost increases that ranged from 0% to 3% of household taxes were considered to have a low effect, while cost increases of 4% to 6% were considered to have a medium effect, and cost increases above 7% were considered to be high.

While household costs range between \$13.00 and \$72.00 for the various alternatives, the existing system (\$13.00), the committed system (\$23.00), the direct cost/revenue neutral system (\$31.00), the expanded Blue Box system (\$31.00) all represent from 1% to 3% of household taxes and are the highest ranked. Further, the direct cost/added revenue system (\$4.00 per household), represents from 4% to 5% of current average household taxes. The mixed waste systems represent cost increases of above 5% and therefore are lowest ranked.

Table 5.3.2
Percent of Diversion Costs to
Household Municipal Taxes

| | Current Total Municipal Taxation Per Household | Cost of Diversion Per Household | Percent Increase in Household Taxation |
|------------------------------------|---|------------------------------------|--|
| Existing | 1,016.00 | \$13.00 | 1% |
| Committed | 1,016.00 | 23.00 | 2% |
| Direct Cost (Revenue Neutral) A | 1,016.00 | 31.00 | 3% |
| Direct Cost (Added Revenue) B | 1,016.00 | 54.00 | 5% |
| Expanded Blue Box | 1,016.00 | 31.00 | 3% |
| Wet/Dry | 1,016.00 | 23.00 | 2% |
| Mixed Waste (Low Diversion) A | 1,016.00 | 72.00 | 7% |
| Mixed Waste (High Diversion) B | 1,016.00 | 60.00 | 6% |

Source: Future Urban Research

5.3.2 Potential Impact on the Debt Burden of the Municipalities

The impact of the diversion commitment on the municipal capital program was found to be more significant than the tax impact. This analysis assumed that the full capital cost of future diversion commitments would be annualized at 9% over a 10 year period. The effect of increasing the existing debt position in Metro Region on each alternative is shown on Table 5.3.3.

The wet/dry system and the mixed waste alternatives had the largest capital programs and the analysis used reserve funds to offset capital costs. Notwithstanding this, these systems significantly affect Metro Region's associated debt burden. Since the committed program, the direct cost and expanded Blue Box systems have lower capital requirements, Metro's debt burden is affected the least. Further, since the existing system does not require additional debt, it is the highest ranked system.

Table 5.3.3
**Capital Costs Related to
the Diversion Alternatives**

| | Total Existing Debt (\$000) | Total Diversion Debt (\$000) | Percent Increase |
|------------------------------------|-----------------------------------|------------------------------------|---------------------|
| Existing | \$697,018 | 0 | 0% |
| Committed | 697,018 | 135,681 | 19% |
| Direct Cost (Revenue Neutral) A | 697,018 | 135,681 | 19% |
| Direct Cost (Added Revenue) B | 697,018 | 135,681 | 19% |
| Expanded Blue Box | 697,018 | 135,681 | 19% |
| Wet/Dry | 697,018 | 166,781 | 24% |
| Mixed Waste (Low Diversion) A | 697,018 | 240,984 | 35% |
| Mixed Waste (High Diversion) B | 697,018 | 265,984 | 38% |

Source: Future Urban Research

An examination of Metro Region's existing debt charge position, that is, the comparison of debt payments (including principal and interest) to operating expenditures, debt charges represented 4.3% of costs. The future diversion alternatives have the effect of changing these ratios for all systems. With the diversion commitment, as well as for the direct cost and expanded Blue Box systems, the ratio of debt charges to expenditures may increase to 4.7%. With the wet/dry system debt charges may increase to 4.8%. With the mixed waste/low diversion system at 5.1% and the mixed waste/high diversion system, debt charges may increase to 5.2%. This analysis is presented in Table 5.3.4.

Table 5.3.4

**Effect of Diversion Costs on
Municipal Debt Charges**

| | Existing Debt Charges as a Percent of Expenditures | Future Debt Charges as a Percent of Expenditures |
|---------------------------------|--|--|
| Existing | 4.3% | 4.3% |
| Committed | 4.3% | 4.7% |
| Direct Cost (Revenue Neutral) A | 4.3% | 4.7% |
| Direct Cost (Added Revenue) B | 4.3% | 4.7% |
| Expanded Blue Box | 4.3% | 4.7% |
| Wet/Dry | 4.3% | 4.8% |
| Mixed Waste (Low Diversion) A | 4.3% | 5.1% |
| Mixed Waste (High Diversion) B | 4.3% | 5.2% |

Source: Future Urban Research

Debt capacity calculations (the ratio of debt charges to operating expenditures) determine the amount of available debt permitted by the Ministry of Municipal Affairs (former OMB guideline). When estimating debt capacity, a 9% interest rate and a ten year term was used, the total debt capacity for Metro Region approached \$3,519.3 million (Table 5.3.5). The capital costs for the committed, direct cost and expanded Blue Box systems each reduce the Region's debt capacity to 76.0% while wet/dry absorbs 75.0% of capacity. The mixed waste systems absorb the largest amount of debt capacity, leaving Metro with 73.0% of its debt capacity.

Table 5.3.5

**Effect of Diversion Costs
on Debt Capacity**

| | Total Available Debt Capacity (\$000) | Current Remaining Debt Capacity (\$000) | Total Diversion Debt (\$000) | Percent Capacity Remaining |
|---------------------------------------|---|---|---------------------------------------|----------------------------------|
| Existing | \$3,519,362 | \$2,822,344 | 0 | 80% |
| Committed | \$3,519,362 | 2,822,344 | 135,681 | 76% |
| Direct Cost (Revenue Neutral) A | \$3,519,362 | 2,822,344 | 135,681 | 76% |
| Direct Cost (Added Revenue) B | \$3,519,362 | 2,822,344 | 135,681 | 76% |
| Expanded Blue Box | \$3,519,362 | 2,822,344 | 135,681 | 76% |
| Wet/Dry | \$3,519,362 | 2,822,344 | 166,781 | 75% |
| Mixed Waste (Low Diversion) A | \$3,519,362 | 2,822,344 | 240,984 | 73% |
| Mixed Waste (High Diversion) B | \$3,519,362 | 2,822,344 | 265,984 | 73% |

Source: Future Urban Research

5.3.3 Potential Impact on Municipal Reserve Funds

As discussed in the debt burden analysis, the capital costs of the wet/dry system and the mixed waste systems are so large that reserve fund financing was used to offset some of the expenditure. This totalled \$25.0 million for the mixed waste/low diversion system and \$50.0 million for the mixed waste/high diversion system. While debt levels for the other systems are large and potentially subject to reserve contributions, the effect on taxes still remains relatively moderate without funding allocations. It was also shown under the system descriptions that the direct cost added revenue system had the capacity of generating a further \$45.0 million in extra revenue that could have been placed into reserves and used for other waste management/waste diversion activities.

As a result of this, the direct cost/added revenue system is the highest ranked because it adds to the Metro's reserve fund position. Conversely, the mixed waste/high diversion system is lowest ranked because it absorbs the highest amount of reserve funds. The remaining systems: the

existing, the committed, the direct cost/revenue neutral, the wet/dry and the expanded Blue Box systems do not impact on the reserve fund.

5.3.4 Potential Impact on the Level of Municipal Services

As indicated above, the annualized cost effect of the diversion systems have a low to medium impact on household taxation. Based on this, the analysis did not consider reductions in service in the other municipal departments to help fund diversion costs. As such, there would be no impact on the functional service levels in the municipalities.

5.3.5 Potential Impact on the Provincial Treasury

The analysis presented above was in the absence of mitigation. During the course of this study, it was found that reliance on this criteria had to be lessened. Due to budget and social contract considerations, the amount of grant funding beyond the current Provincial fiscal year is uncertain. In the extreme, the Province may find it necessary to address the funding assistance of each 3R's alternative examined in this study on a case-by-case basis. Due to this, evaluations under this criteria became indeterminate. Actual resolution may possibly depend on actual funding negotiations with each Region.

Notwithstanding this, and pending funding arrangements with Metro Region, it could be assumed that 30% of the capital costs of the alternative systems could be funded externally. While the primary source of funds may be Provincial grants, the assumption does not exclude the possibility of other private funding sources. If this were the case, the alternative systems in Peel may be funded as follows:

| | |
|-------------------|----------------|
| Existing | 0 |
| Committed | \$45.2 million |
| Direct Cost A | 45.2 million |
| Direct Cost B | 45.2 million |
| Expanded Blue Box | 45.2 million |
| Wet/Dry | 55.6 million |
| Mixed Waste A | 88.3 million |
| Mixed Waste B | 105.3 million |

5.3.6 Potential Impact on Private Sector Industries

The effects analysis does not take into account direct impacts on the private sector to offset costs related to the diversion commitment (apart from a possible mitigation scenario shown as part of the Impact on the Provincial Treasury). It also assumes the continuation of existing municipal funding mechanisms. However, the private sector does get impacted taxation. That is, a portion of diversion costs are levied in local taxes.

Table 5.3.6 shows the level of private sector taxation in Metro for each diversion system. While taxes currently collected from the business sector now approach \$897 million, tax charges for each system range from 1% for existing and 2% for the committed and wet/dry, 3% for both direct cost systems (added revenue bag charges are only residually related) and the expanded Blue Box to 6% for the mixed waste/high diversion system and 7% for the mixed waste/low diversion system.

Table 5.3.6
System Effects on Business Taxes

| | Total Existing Business Taxes ('\$000) | Total Added Taxes Due To Diversion ('\$000) | Percent Increase |
|------------------------------------|--|--|---------------------|
| Existing | \$896,869 | \$12,349 | 1% |
| Committed | 896,869 | 22,029 | 2% |
| Direct Cost (Revenue Neutral) A | 896,869 | 30,042 | 3% |
| Direct Cost (Added Revenue) B | 896,869 | 30,042 | 3% |
| Expanded Blue Box | 896,869 | 30,845 | 3% |
| Wet/Dry | 896,869 | 22,522 | 2% |
| Mixed Waste (Low Diversion) A | 896,869 | 71,797 | 7% |
| Mixed Waste (High Diversion) B | 896,869 | 60,377 | 6% |

Source: Future Urban Research

As a result, the existing system is the highest ranked. The committed system, the direct cost systems, the expanded Blue Box system and the wet/dry system are second highest ranked.

Conversely, the mixed waste/low diversion system is lowest ranked and the mixed waste/high diversion system is second lowest ranked.

5.3.7 Summary of Effects Analysis

The following summarizes the above effects by criteria and indicator for Metropolitan Toronto and is presented on Table 5.3.7.

The existing system is the highest ranked system. The existing system would have the least cost impact on the tax payers in Metro and does not present significant debt costs to the financial structure. The committed system is second highest ranked. The direct cost systems and expanded Blue Box systems are the third highest ranked. While the direct cost systems represent very different revenue strategies the ranking indicates the systems relative merits. The direct cost/revenue neutral system imposes a low cost per household and does not require significant of capital costs, while the direct cost added revenue imposes a medium cost per household and it also adds to the reserve fund position. The expanded Blue Box shares the merits of the direct cost/revenue neutral system which imposes a low cost per household and it also does not require significant capital costs.

The mixed waste/low diversion system is the lowest ranked system because it carries with it the highest tax effects and also the highest capital cost. Similarly, while less burdensome, the mixed waste/high diversion system represents the second lowest ranked system based on its effect on the Region's debt capacity. The third lowest ranked system was the wet/dry system primarily as a result of it's impact on debt capacity and municipal reserves.

Table 6.3.7

SYSTEM NET EFFECTS TABLE BY INDICATOR

METROPOLITAN TORONTO

| | Existing | Committed | Direct Cost A | Direct Cost B | Expanded Blue Box | Wet/Dry | Mixed Waste a | Mixed Waste b |
|--------------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| | Highest Ranked | Second Highest Ranked | Third Highest Ranked | Third Highest Ranked | Third Highest Ranked | Third Lowest Ranked | Lowest Ranked | Second Lowest Ranked |
| Overall Rank | 1 | 2 | 3 | 3 | 6 | 8 | 7 | 7 |
| Impact on Local Taxpayers | 23,747,137 | 42,362,618 | 57,773,605 | 102,773,605 | 59,317,648 | 43,311,566 | 138,071,300 | 116,109,081 |
| Tax Levy | 13 | 23 | 31 | 54 | 31 | 23 | 72 | 60 |
| Tax Per Household | 1% | 2% | 3% | 5% | 3% | 2% | 7% | 6% |
| Impact on Municipal Debt Burden | 1 | 2 | 2 | 2 | 6 | 7 | 8 | 8 |
| Amount of Debt | 0 | 135,681,000 | 135,681,000 | 135,681,000 | 135,681,000 | 166,781,000 | 240,964,000 | 265,964,000 |
| Debt Payments | 0 | 21,142,000 | 21,142,000 | 21,142,000 | 21,142,000 | 25,988,000 | 37,550,000 | 41,446,000 |
| Debt Capacity | 80% | 76% | 76% | 76% | 76% | 75% | 73% | 73% |
| Impact on Municipal Reserves | 2 | 2 | 2 | 1 | 2 | 7 | 8 | 8 |
| Total Reserves | 0 | 0 | 0 | 45,000,000 | 0 | 0 | -25,000,000 | -50,000,000 |
| Reserves/Household | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 |
| Reserves/Expenses | 0 | 0 | 0 | 1% | 0 | 0 | 0 | 0 |
| Impact on Municipal Level of Service | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Operating Cost Expense/Household | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Impact on Provincial Treasury | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements |
| Impact on Private Sector Industries | 1 | 1 | 1 | 1 | 1 | 8 | 7 | 7 |
| Private Funding Costs | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Higher Prices | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Private Taxes | 1% | 2% | 3% | 3% | 3% | 2% | 7% | 6% |

5.3.8 Sensitivity Analysis

To confirm the overall ranking, the municipal finance component also undertook a sensitivity analysis on key variables that may affect the criteria and indicators. The sensitivity analysis examined variations in capital costs (plus or minus 10% and 20%), rates of waste diversion (plus or minus 5%), variations in operating cost (plus or minus 5% and 10%) differences in waste disposal costs per tonne including the rate the Metro currently charges Durham Region for solid waste disposal and, finally, household growth which includes a no growth scenario. While utilizing the various ranges of indicators presented above, the sensitivity analysis showed that, the general ranking of the systems presented above would not materially change.

Table 6.3.8

**SENSITIVITY ANALYSIS
METRO**

| | Existing | Committed | Direct Cost A | Direct Cost B | Expanded | Wet/Dry | Mixed a | Mixed b |
|-------------------------|---------------|---------------|---|------------------|---------------|---------------|----------------|----------------|
| Net Annual Costs | 23,747 | 42,363 | 57,774 | 102,774 | 69,318 | 43,312 | 138,071 | 116,109 |
| Capital Costs | | | | | | | | |
| 10% | 23,747 | 43,477 | 59,888 | 104,888 | 61,432 | 45,910 | 142,216 | 121,033 |
| 20% | 23,747 | 46,591 | 62,002 | 107,002 | 63,546 | 48,509 | 146,360 | 125,957 |
| -10% | 23,747 | 40,248 | 55,659 | 100,659 | 57,203 | 40,713 | 133,927 | 111,186 |
| -20% | 23,747 | 38,134 | 53,545 | 98,545 | 55,089 | 38,134 | 129,782 | 106,262 |
| | | | no change in ranking | | | | | |
| Diversion Rate | | | | | | | | |
| 5% n/a | | 36,485 | 51,897 | 96,897 | 53,441 | 37,435 | 132,195 | 110,233 |
| -5% n/a | | 48,239 | 63,650 | 108,650 | 65,194 | 49,188 | 143,948 | 121,986 |
| | | | no change in ranking | | | | | |
| Operating Cost | | | | | | | | |
| 5% | 23,747 | 44,658 | 62,073 | 107,073 | 64,047 | 47,821 | 146,858 | 124,896 |
| 10% | 23,747 | 46,953 | 66,373 | 111,373 | 68,777 | 52,331 | 155,646 | 133,684 |
| -5% | 23,747 | 40,067 | 53,474 | 98,474 | 54,588 | 38,802 | 129,284 | 107,322 |
| | | | more cost favours existing less cost favours wet/dry | | | | | |
| Cost Per Tonne | | | | | | | | |
| + \$40 | 15,552 | 32,490 | 38,028 | 83,028 | 36,751 | 14,163 | 107,983 | 75,678 |
| 20 | 19,650 | 37,426 | 47,901 | 92,901 | 48,034 | 28,737 | 123,027 | 95,893 |
| | | | higher disposal fees favour wet/dry | | | | | |
| Household Growth | | | | | | | | |
| analysis | 1% | 2% | 3% | 5% | 3% | 2% | 7% | 6% |
| no growth | 1% | 2% | 3% | 6% | 3% | 2% | 8% | 6% |
| | | | no change in ranking | | | | | |

Source: Future Urban Research

5.4 REGION OF YORK

While each of the system alternatives for York Region have been described in the Environmental Assessment document prepared by M.M. Dillon Limited Consulting Engineers and Planners, there are specific cost and revenue elements associated with each of the diversion alternatives which are summarized from a financial perspective below.

- a) Existing System: As described in the previously presented baseline documentation and system descriptions, this system does not include additional costs or revenues beyond those that are already in place.
- b) Committed System: This system includes **new** capital or program items that would potentially change existing financing requirements. These are programs that have been identified as committed within the five year capital budgets. More specifically, the alternatives presented only include expenditures that could potentially increase the amount of tonnage diverted, therefore inflation increases to existing budget items have not been included. In total, York Region is expected to incur approximately \$2.8 million in capital expenditures over the next five years.
- c) Direct Cost: This system would charge for the amount of waste placed curbside. This suggests that York Region would have two options for charging for waste collection. Under a revenue neutral approach, no additional revenue would be charged for waste and diversion collection purposes from the home owners beyond what is now collected via municipal taxes. That is, added direct cost revenue would be netted from collection costs before household tax rates are determined.

Under an additional revenue direct cost system, garbage bag charges would be levied in addition to normal property taxes that include waste diversion and disposal collection costs. The extra revenue, while representing an added charge to the homeowner, would then be available to the Region to assist in financing other diversion and waste management activities. This analysis assumed that the added charges would yield approximately \$6.5 million per year to York Region. This approaches \$50 per household.

- d) Expanded Blue Box: The committed system in York would likely be able to handle the expanded Blue Box system. Depending on capacity of the new MRF, however, a further MRF may be needed in the more distant future. The total capital program is therefore the same as York Region's committed program,

except that a further \$10 million provision has been made for an additional new MRF in the future.

- e) Wet/Dry: This system would include two additional capital costs to the costs identified in the committed system, these include:

- \$13.0 million to provide roll-out carts to 130,000 single family households and similar other households
- \$7.1 million for 47 new trucks

The analysis assumed that half of the cost of the trucks and roll-out carts would be included in diversion budgets with the other half being debentured. This recognizes the fact that to establish a wet/dry system a staging strategy would be necessary. Therefore, the system would be phased over time and trucks would be replaced gradually as exiting vehicles wear out.

- f) Mixed Waste: This system would require a \$57.7 million expenditure for a mixed waste plant (with capacity of 125,000 tonnes per year -- 480 tonnes per day).

5.4.1 Potential Impact on Local Taxpayers

The following describes the net system effects on the local taxpayers. Table 5.4.1 indicates that, when all elements are considered, gross costs in York Region may range from the existing level of \$7.7 million per year to \$37.6 million per year for the mixed waste system. Further, while the committed expansion program may present a gross annual operating cost of \$8.2 million per year, the direct cost/neutral revenue system may approach \$12.5 million per year, with a direct cost/added revenue system approaching \$19.0 million in annual levy costs.

However, when these costs are offset with the savings gained by diverting waste from disposal and landfill, the costs decline. This analysis assumed that overall disposal costs approach \$100 per tonne. This represents \$60 per tonne in collection costs and \$40 per tonne in disposal costs, which has been determined from York Region's historical experience. This latter amount is an empirically determined rate using waste management practices in Ontario and does not represent York's current \$90 per tonne amount charged at the landfill. Since the IWA may be in operation when the selected diversion alternative is put in place, a rate that more closely approaches actual processing costs has been used. (This is tested in the sensitivity analysis shown below.). This analysis and treatment of disposal costs is also shown on Table 5.4.1. These range from \$2.2 million for the existing system to \$23.5 million for a mixed waste/low diversion system.

Table 5.4.1

Cost of Alternative Diversion Systems
Net Annual Diversion Costs -- General Levy

| | Gross Costs | Net of Disposal Costs |
|---------------------------------|-------------|-----------------------|
| Existing System | \$7,770,701 | \$2,226,701 |
| Committed Program | 8,204,676 | 2,660,676 |
| Direct Cost (Revenue Neutral) A | 12,514,682 | 2,614,682 |
| Direct Cost (Added Revenue) B | 19,014,682 | 9,114,682 |
| Expanded Blue Box | 15,499,676 | 4,411,676 |
| Wet / Dry | 28,879,088 | 16,009,088 |
| Mixed Waste (Low Diversion) A | 37,656,462 | 23,598,462 |
| Mixed Waste (High Diversion) B | 37,656,462 | 20,034,462 |

Source: Future Urban Research

The household cost of diversion can also be compared to the level of municipal taxation paid in York Region. Table 5.4.2 shows that diversion activities currently represent \$10.00 per household, or 1% of total municipal taxes of \$1,040.00 per household per year (excluding school taxes). To estimate the future effects of the diversion alternatives on a household basis, the analysis included household growth estimates for York. This was included to capture the effect of an increasing tax base.

To estimate the effect of the system, a cost per household guideline was utilized. Cost increases that ranged from 0% to 3% of household taxes were considered to have a low effect, while cost increases of 4% to 6% were considered to have a medium effect, and cost increases above 7% were considered to be high.

While household costs range between \$10.00 and \$77.00 for the various alternatives, the existing system (\$10.00), the committed system (\$12.00), the direct cost/revenue neutral and added revenue systems (\$12.00 and \$32.00 respectively) and the expanded Blue Box system (\$17.00) all represent from 1% to 3% of household taxes. Further, the wet/dry system (\$53.00) represents from 4% to 5% of current average household taxes while the mixed waste systems represent cost increases of above 5% and therefore are ranked lowest.

Table 5.4.2
Percent of Diversion Costs to
Household Municipal Taxes

| | Current Total Municipal Taxation Per Household | Cost of Diversion Per Household | Percent Increase in Household Taxation |
|------------------------------------|---|------------------------------------|--|
| Existing | 1,040.00 | \$10.00 | 1% |
| Committed | 1,040.00 | 12.00 | 1% |
| Direct Cost (Revenue Neutral) A | 1,040.00 | 12.00 | 1% |
| Direct Cost (Added Revenue) B | 1,040.00 | 32.00 | 3% |
| Expanded Blue Box | 1,040.00 | 17.00 | 2% |
| Wet/Dry | 1,040.00 | 53.00 | 5% |
| Mixed Waste (Low Diversion) A | 1,040.00 | 77.00 | 7% |
| Mixed Waste (High Diversion) B | 1,040.00 | 66.00 | 6% |

Source: Future Urban Research

5.4.2 Potential Impact on the Debt Burden of the Municipalities

The impact of the diversion commitment on the municipal capital program was found to be more significant than the tax impact. This analysis assumed that the full capital cost of future diversion commitments would be annualized at 9% over a 10 year period. The effect of increasing the existing debt position in York Region on each alternative is shown on Table 5.4.3.

Since the existing system does not require additional debt it is the lowest capital cost system and therefore is highest ranked. The committed and direct cost systems have low capital requirements, and York's debt burden is nomially affected, these systems are second highest. The expanded Blue Box system is the third highest ranked system. The wet/dry and mixed waste systems have the largest capital programs and affect the Region's debt burden the most and, therefore, are the lowest ranked systems.

Table 5.4.3

**Capital Costs Related to
the Diversion Alternatives**

| | Total Existing Debt (\$000) | Total Diversion Debt (\$000) | Percent Increase |
|------------------------------------|-----------------------------------|------------------------------------|---------------------|
| Existing | \$39,212 | 0 | 0% |
| Committed | 39,212 | 2,785 | 7% |
| Direct Cost (Revenue Neutral) A | 39,212 | 2,785 | 7% |
| Direct Cost (Added Revenue) B | 39,212 | 2,785 | 7% |
| Expanded Blue Box | 39,212 | 10,000 | 26% |
| Wet/Dry | 39,212 | 45,000 | 115% |
| Mixed Waste (Low Diversion) A | 39,212 | 57,785 | 147% |
| Mixed Waste (High Diversion) B | 39,212 | 57,785 | 147% |

Source: Future Urban Research

An examination of York Region's existing debt charge position, that is, the comparison of debt payments (including principal and interest) to operating expenditures, debt charges represented 2.1% of costs. The future diversion alternatives have the effect of changing these ratios for all systems. With the diversion commitment, as well as for the direct cost systems, the ratio of debt charges to expenditures may increase to 2.2%. With the expanded Blue Box system debt charges may increase to 2.5%. With the wet/dry system at 3.7% and the mixed waste systems, debt charges may increase to 4.2%. This analysis is presented in Table 5.4.4.

Table 5.4.4
Effect of Diversion Costs on
Municipal Debt Charges

| | Existing Debt Charges as a Percent of Expenditures | Future Debt Charges as a Percent of Expenditures |
|---------------------------------|--|--|
| Existing | 2.1% | 2.1% |
| Committed | 2.1% | 2.2% |
| Direct Cost (Revenue Neutral) A | 2.1% | 2.2% |
| Direct Cost (Added Revenue) B | 2.1% | 2.2% |
| Expanded Blue Box | 2.1% | 2.5% |
| Wet/Dry | 2.1% | 3.7% |
| Mixed Waste (Low Diversion) A | 2.1% | 4.2% |
| Mixed Waste (High Diversion) B | 2.1% | 4.2% |

Source: Future Urban Research

Debt capacity calculations (the ratio of debt charges to operating expenditures) determines the amount of available debt permitted by the Ministry of Municipal Affairs (former OMB guideline). When estimating debt capacity (a 9% interest rate and a ten year term was used), the total debt capacity for York Region approached \$340.7 million (Table 5.4.5). The capital costs for the mixed waste systems reduce the Region's debt capacity to 72.0%, while wet/dry reduces capacity to 75.0%. These are the lowest ranked systems. The existing, committed and direct cost systems absorb the least amount of debt, leaving York with 88.0% and were the highest ranked systems. The expanded Blue Box is the third highest ranked system reducing the debt capacity to 86.0%.

Table 5.4.5

**Effect of Diversion Costs
on Debt Capacity**

| | Total Available Debt Capacity (\$000) | Current Remaining Debt Capacity (\$000) | Total Diversion Debt (\$000) | Percent Capacity Remaining |
|---------------------------------------|---|---|---------------------------------------|----------------------------------|
| Existing | \$340,768 | \$301,556 | 0 | 88% |
| Committed | 340,768 | 301,556 | 2,785 | 88% |
| Direct Cost (Revenue Neutral) A | 340,768 | 301,556 | 2,785 | 88% |
| Direct Cost (Added Revenue) B | 340,768 | 301,556 | 2,785 | 88% |
| Expanded Blue Box | 340,768 | 301,556 | 10,000 | 86% |
| Wet/Dry | 340,768 | 301,556 | 45,000 | 75% |
| Mixed Waste (Low Diversion) A | 340,768 | 301,556 | 57,785 | 72% |
| Mixed Waste (High Diversion) B | 340,768 | 301,556 | 57,785 | 72% |

Source: Future Urban Research

5.4.3 Potential Impact on Municipal Reserve Funds

Under the system descriptions, the direct cost added revenue system had the capacity of generating a further \$6.5 million in extra revenue that could have been placed into reserves and used for other waste management/waste diversion activities.

As a result of this, the direct cost/added revenue system is the highest ranked since it adds to the Region's reserve fund position. Conversely, the remaining systems including: the existing, the committed, the direct cost/revenue neutral, the wet/dry, mixed waste and the expanded Blue Box are the lowest ranked even though they do not affect the reserve fund.

5.4.4 Potential Impact on the Level of Municipal Services

As indicated above, the annualized cost effect of the diversion systems have a low to medium impact on household taxation. Based on this, there was no reason to assume reductions in

service in the other municipal departments to help fund diversion costs. As such, there would be no impact on the functional service levels in the municipalities.

5.4.5 Potential Impact on the Provincial Treasury

The analysis presented above was in the absence of mitigation. During the course of this study, it was found that reliance on this criteria had to be lessened. Due to budget and social contract considerations, the amount of grant funding beyond the current Provincial fiscal year is uncertain. In the extreme, the Province may find it necessary to address the funding assistance of each 3R's alternative examined in this study on a case-by-case basis. Due to this, evaluations under this criteria became indeterminate. Actual resolution may possibly depend on actual funding negotiations with each Region.

Notwithstanding this, and pending funding arrangements with York Region, it could be assumed that 30% of the capital costs of the alternative systems could be funded externally. While the primary source of funds may be Provincial grants, the analysis does not exclude the possibility of other private funding sources. If this were the case, the alternative systems in York may be funded as follows:

| | |
|-------------------|--------------|
| Existing | 0 |
| Committed | \$835,500 |
| Direct Cost A | \$835,500 |
| Direct Cost B | \$835,500 |
| Expanded Blue Box | 3.0 million |
| Wet/Dry | 13.5 million |
| Mixed Waste A | 17.3 million |
| Mixed Waste B | 17.3 million |

5.4.6 Potential Impact on Private Sector Industries

The effects analysis does not take into account direct impacts on the private sector to offset costs related to the diversion commitment (apart from a possible mitigation scenario shown as part of the Impact on the Provincial Treasury). It also assumes the continuation of existing municipal funding mechanisms. However, the private sector does get an indirect taxation effect, whereby a portion of the diversion costs are levied in local taxes.

Table 5.4.6 shows the level of private sector taxation in York for each diversion system. While taxes currently collected from the business sector now approach \$61.3 million, tax charges for each system range from 1% for existing, committed and direct cost systems and 2% for the

expanded Blue Box, 7% for wet/dry and 9% for the mixed waste/high diversion system and 11% for the mixed waste/low diversion system.

Table 5.4.6
System Effects on Business Taxes

| | Total Existing Business Taxes (\$000) | Total Added Taxes Due To Diversion (\$000) | Percent Increase |
|------------------------------------|---|---|---------------------|
| Existing | \$61,333 | \$668 | 1% |
| Committed | 61,333 | 798 | 1% |
| Direct Cost (Revenue Neutral) A | 61,333 | 784 | 1% |
| Direct Cost (Added Revenue) B | 61,333 | 784 | 1% |
| Expanded Blue Box | 61,333 | 1,324 | 2% |
| Wet/Dry | 61,333 | 4,803 | 7% |
| Mixed Waste (Low Diversion) A | 61,333 | 7,080 | 11% |
| Mixed Waste (High Diversion) B | 61,333 | 6,010 | 9% |

Source: Future Urban Research

5.4.7 Summary of Effects Analysis

The following summarizes the above effects by criteria and indicator for York Region. The system alternatives were first ranked by the criteria and indicators by the Municipal Finance group. The net effects are summarized on Table 5.4.7. The criteria themselves are not ranked in terms of order of importance, therefore all criteria maintain an equal weighting and no one criteria is viewed to carry more weight, or be of more significance than others. By considering the relative magnitude of the effects for each of the criteria and indicators, an overall systems ranking can be completed for Municipal Finance. This is also summarized on Table 5.4.7.

The highest ranked system is the existing system. The existing system would have the least cost impact on the tax payers in York and does not present significant debt costs to the financial structure. The committed and direct cost/revenue neutral systems are the second highest ranked

systems. They impose a low cost per household and do not require significant capital costs. The expanded Blue Box and the direct cost/revenue added systems are the third highest ranked systems.

The mixed waste systems are the lowest ranked because they carry the highest tax effects and the highest capital costs. The second lowest ranked system was the wet/dry system because of its impact on debt capacity and municipal reserves.

Table 6.4.7

SYSTEM NET EFFECTS TABLE BY INDICATOR

YORK

| | Existing | Committed | Direct Cost A | Direct Cost B | Expanded Blue Box | Wet/Dry | Mixed Waste a | Mixed Waste b |
|--------------------------------------|------------------------------|-------------------------------|------------------------------|-------------------------------|------------------------------|------------------------------|--------------------------------|-------------------------------|
| Overall Rank | 1 Highest Ranked | 2 Second Highest Ranked | 3 Third Highest Ranked | 4 Fourth Highest Ranked | 5 Fifth Highest Ranked | 6 Sixth Highest Ranked | 7 Seventh Highest Ranked | 8 Eighth Highest Ranked |
| Impact on Local Taxpayers | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Tax Levy | 2,226,701 | 2,660,576 | 2,614,692 | 9,114,692 | 4,411,676 | 18,009,088 | 23,596,462 | 20,034,462 |
| Tax Per Household | 10 | 12 | 12 | 32 | 17 | 50 | 77 | 66 |
| | 1% | 1% | 1% | 3% | 2% | 5% | 7% | 6% |
| Impact on Municipal Debt Burden | 1 | 2 | 2 | 5 | 6 | 8 | 8 | 8 |
| Amount of Debt | 0 | 2,785,000 | 2,785,000 | 2,785,000 | 10,000,000 | 45,000,000 | 57,785,000 | 57,785,000 |
| Debt Payments | 0 | 434,000 | 434,000 | 434,000 | 1,558,000 | 7,012,000 | 9,004,000 | 9,004,000 |
| Debt Capacity | 88% | 88% | 88% | 88% | 86% | 75% | 72% | 72% |
| Impact on Municipal Reserves | 8 | 8 | 1 | 8 | 8 | 8 | 8 | 8 |
| Total Reserves | 0 | 0 | 0 | 6,500,000 | 0 | 0 | 0 | 0 |
| Reserves/Household | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 |
| Reserves/Expenses | 0 | 0 | 0 | 1% | 0 | 0 | 0 | 0 |
| Impact on Municipal Level of Service | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Operating Cost | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Expense/Household | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Impact on Provincial Treasury | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements |
| Impact on Private Sector Industries | 1 | 1 | 1 | 1 | 1 | 8 | 8 | 8 |
| Private Funding | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Costs | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Higher Prices | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Private Taxes | 1% | 1% | 1% | 1% | 2% | 7% | 11% | 9% |

5.4.8 Sensitivity Analysis

To confirm the overall ranking, the municipal finance component also undertook a sensitivity analysis on key variables that may affect the criteria indicators. The sensitivity analysis examined variations in capital costs (plus or minus 10% and 20%), rates of waste diversion (plus or minus 5%), variations in operating cost (plus or minus 5% and 10%) differences in waste disposal costs per tonne for solid waste disposal and, finally, household growth which includes a no growth scenario. While utilizing the various ranges of indicators presented above, the sensitivity analysis showed that, the general ranking of the systems presented above would not materially change.

Table 6.4.8

**SENSITIVITY ANALYSIS
YORK**

| | Existing | Committed | Direct Cost A | Direct Cost B | Expanded | Wet/Dry | Mixed a | Mixed b |
|-------------------------|--------------|--------------|---|------------------|--------------|---------------|---------------|---------------|
| Net Annual Costs | 2,226 | 2,661 | 2,614 | 9,115 | 4,411 | 15,009 | 23,698 | 20,034 |
| Capital Costs | | | | | | | | |
| 10% | 2,226 | 2,704 | 2,658 | 9,158 | 4,567 | 16,710 | 24,499 | 20,935 |
| 20% | 2,226 | 2,747 | 2,701 | 9,201 | 4,723 | 17,411 | 25,399 | 21,835 |
| -10% | 2,226 | 2,617 | 2,571 | 9,071 | 4,256 | 15,308 | 22,698 | 19,134 |
| -20% | 2,226 | 2,573 | 2,528 | 9,028 | 4,100 | 14,607 | 21,798 | 18,233 |
| | | | no change in ranking | | | | | |
| Diversion Rate | | | | | | | | |
| 5% n/a | n/a | | 1,624 | 8,125 | 3,422 | 15,019 | 22,608 | 19,044 |
| -5% n/a | n/a | | 3,605 | 10,105 | 5,402 | 16,999 | 24,588 | 21,024 |
| | | | -5% favours direct cost a | | | | | |
| Operating Cost | | | | | | | | |
| 6% | 2,226 | 3,048 | 3,218 | 9,719 | 5,108 | 17,102 | 25,031 | 21,467 |
| 10% | 2,226 | 3,435 | 3,823 | 10,323 | 5,806 | 18,196 | 26,437 | 22,900 |
| -5% | 2,226 | 2,274 | 2,011 | 8,511 | 3,715 | 14,916 | 22,165 | 18,602 |
| | | | no change in ranking | | | | | |
| Cost Per Tonne | | | | | | | | |
| + \$40 | 9 | 443 | -1,345 | 5,155 | -24 | 10,861 | 17,975 | 12,986 |
| 20 | 1,118 | 1,552 | 635 | 7,135 | 2,194 | 13,435 | 20,787 | 16,510 |
| | | | higher disposal fees favour direct cost a and expanded blue box | | | | | |
| Household Growth | | | | | | | | |
| analysis | 1% | 1% | 1% | 3% | 2% | 5% | 7% | 6% |
| no growth | 1% | 2% | 2% | 5% | 2% | 8% | 11% | 9% |
| | | | no change in ranking | | | | | |

Source: Future Urban Research

5.5 REGION OF PEEL

While each of the system alternatives for the Region of Peel have been previously described in the Environmental Assessment document prepared by M.M. Dillon Limited Consulting Engineers and Planners, there are specific cost and revenue elements associated with each of the diversion alternatives which are summarized from a financial perspective below.

- a) Existing System: As described in the previously presented baseline documentation and system descriptions, this system does not include additional costs or revenues beyond those that are already in place.
- b) Committed System: This system includes new capital or program items that would potentially change existing financing requirements. These are programs that have been identified as committed within the five year capital budgets. More specifically, the alternatives presented only include expenditures that could potentially increase the amount of tonnage diverted, therefore inflation increases to existing budget items have not been included. In total, Peel Region is expected to incur \$90.3 million in capital expenditures over the next five years.
- c) Direct Cost: This system would charge for the amount of waste placed curbside. This suggests that Peel Region would have two options for charging for waste collection. Under a revenue neutral approach, no additional revenue would be charged for waste and diversion collection purposes from the home owners beyond what is now collected via municipal taxes. That is, added direct cost revenue would be netted from collection costs before household tax rates are determined.

Under an additional revenue direct cost system, garbage bag charges would be levied in addition to normal property taxes that include waste diversion and disposal collection costs. The extra revenue, while representing an added charge to the homeowner, would then be available to the Region to assist in financing other diversion and waste management activities. This analysis assumed that the added charges would yield approximately \$10.0 million per year to Peel Region. This approaches \$50 per household.
- d) Expanded Blue Box: The committed system in Peel would likely be able to handle the expanded Blue Box, after the new MRF is constructed. The total program is therefore the same as the committed program.
- e) Wet/Dry: This system would include two additional capital costs to the costs identified in the committed system, these include:

- \$12.0 million to provide roll-out carts to 120,000 single family households
- \$9.0 million for 56 new trucks

The analysis assumed that half of the cost of the trucks and roll-out carts would be included in diversion budgets with the other half being debentured. This recognizes the fact that to establish a wet/dry system a staging strategy would be necessary. Therefore, the system would be phased over time and trucks would be replaced gradually as exiting vehicles wear out.

- f) Mixed Waste: This system would require an \$80.0 to \$100 million expenditure for a mixed waste plant (with capacity of 230,000 tonnes per year). If this system were adopted, it would eliminate the need for the construction of the central composting facility (estimated cost \$38.5 million) outlined in the committed system. The cost of this system therefore would be \$25.0 million for a new MRF, \$25.0 million for 7 recycling centres and \$80.0 to \$100 million for a mixed waste processing plant. To offset these costs, reserve allocations of \$40 million and \$45 million have been allotted from Peel's reserve funds for the mixed waste A (low diversion) and mixed waste B (high diversion) systems respectively.

5.5.1 Potential Impact on Local Taxpayers

The following describes the net system effects on the local taxpayers. Table 5.5.1 indicates that, when all elements are considered, gross costs in Peel Region may range from the existing level of \$8.6 million per year to \$58.4 million per year for the mixed waste system. Further, while the committed expansion program may present a gross annual operating cost of \$24.3 million per year, the direct cost/neutral revenue system may approach \$32.6 million per year, with a direct cost/added revenue system approaching \$42.6 million in annual levy costs.

However, when these costs are offset with the savings gained by diverting waste from disposal and landfill, the costs decline. This analysis assumed that overall disposal costs approach \$100 per tonne. This represents \$60 per tonne in collection costs and \$40 per tonne in disposal costs. This latter amount is an empirically determined rate using waste management practices in Ontario and does not represent Peel's current \$80 per tonne charged at its landfill. Since the IWA may be in operation when the selected diversion alternative is put in place, a rate that more closely approaches actual processing costs has been used. (This is tested in the sensitivity analysis shown below.). This analysis and treatment of disposal costs is also shown on Table 5.5.1. These range from \$3.5 million for the existing system to \$29.1 million for a mixed waste/low diversion system.

The household cost of diversion can also be compared to the level of municipal taxation paid in

Peel Region. Table 5.5.2 shows that diversion activities currently represent \$8.00 per household, or 1% of total municipal taxes of \$943.00 per household per year (excluding school taxes). To estimate the future effects of the diversion alternatives on a household basis, the analysis included household growth estimates for Peel. This was included to capture the effect of an increasing tax base.

Table 5.5.1
Cost of Alternative Diversion Systems
Net Annual Diversion Costs -- General Levy

| | Gross Costs | Net of Disposal Costs |
|---------------------------------|-------------|-----------------------|
| Existing System | \$8,648,000 | \$3,568,000 |
| Committed Program | 24,343,800 | 16,723,800 |
| Direct Cost (Revenue Neutral) A | 32,610,000 | 18,589,200 |
| Direct Cost (Added Revenue) B | 42,610,000 | 28,589,200 |
| Expanded Blue Box | 33,447,400 | 18,817,000 |
| Wet / Dry | 39,318,700 | 17,943,800 |
| Mixed Waste (Low Diversion) A | 55,322,100 | 29,128,300 |
| Mixed Waste (High Diversion) B | 58,438,500 | 24,299,400 |

Source: Future Urban Research

To estimate the effect of the system, a cost per household guideline was utilized. Cost increases that ranged from 0% to 3% of household taxes were considered to have a low effect, while cost increases of 4% to 6% were considered to have a medium effect, and cost increases above 7% were considered to be high.

While household costs range between \$8.00 and \$47.00 for the various alternatives, the existing system, the committed system (\$28.00), the wet/dry (\$30.00), the direct cost/revenue neutral system (\$31.00), the expanded Blue Box system (\$31.00) all represent from 1% to 3% of household taxes and are the highest ranked systems. Further, the direct cost/added revenue system (\$46.00 per household), the mixed waste/low diversion system (\$47.00 per household) and the mixed waste/high diversion system (\$44.00) represent from 4% to 5% of current average household taxes and therefore are the lowest ranked systems.

Table 5.5.2
Percent of Diversion Costs to
Household Municipal Taxes

| | Current Total Municipal Taxation Per Household | Cost of Diversion Per Household | Percent Increase in Household Taxation |
|------------------------------------|---|------------------------------------|--|
| Existing | 943.00 | \$8.00 | 1% |
| Committed | 943.00 | 28.00 | 3% |
| Direct Cost (Revenue Neutral) A | 943.00 | 31.00 | 3% |
| Direct Cost (Added Revenue) B | 943.00 | 46.00 | 5% |
| Expanded Blue Box | 943.00 | 31.00 | 3% |
| Wet/Dry | 943.00 | 30.00 | 3% |
| Mixed Waste (Low Diversion) A | 943.00 | 47.00 | 5% |
| Mixed Waste (High Diversion) B | 943.00 | 44.00 | 4% |

Source: Future Urban Research

5.5.2 Potential Impact on the Debt Burden of the Municipalities

The effects of the diversion commitment on the municipal capital programs was found to be more significant than the tax impact. This analysis assumed that the full capital cost of future diversion commitments would be annualized at 9% for a 10 year period. The effect of increasing the existing debt position in Peel Region due on each alternative is shown on Table 5.5.3. For the wet/dry system and the mixed waste alternatives, having the largest capital programs, reserve funds were used to offset capital costs. Notwithstanding this, these systems significantly affect Peel Region's associated debt burden. Conversely, since the committed program, the direct cost and expanded Blue Box systems have lower capital requirements, Peel's debt burden is affected the least in these alternatives. Further, since the existing system does not require additional debt, it is the lowest capital cost system.

Table 5.5.3
Capital Costs Related to
the Diversion Alternatives

| | Total Existing Debt (\$000) | Total Diversion Debt (\$000) | Percent Increase |
|------------------------------------|-----------------------------------|------------------------------------|---------------------|
| Existing | \$107,800 | 0 | 0% |
| Committed | 107,800 | 90,300 | 84% |
| Direct Cost (Revenue Neutral) A | 107,800 | 90,300 | 84% |
| Direct Cost (Added Revenue) B | 107,800 | 90,300 | 84% |
| Expanded Blue Box | 107,800 | 90,300 | 84% |
| Wet/Dry | 107,800 | 90,300 | 84% |
| Mixed Waste (Low Diversion) A | 107,800 | 91,000* | 84% |
| Mixed Waste (High Diversion) B | 107,800 | 105,000** | 97% |

* includes \$40 million reserve funding

** includes \$45 million reserve funding

Source: Future Urban Research

An examination of Peel Region's existing debt charge position, that is, the comparison of debt payments (including principal and interest) to operating expenditures, debt charges represented 5.2% of costs. The future diversion alternatives have the effect of changing these ratios for all systems. With the diversion commitment, as well as for the direct cost and expanded Blue Box systems, wet/dry system and the mixed waste/low diversion the ratio of debt charges to expenditures may increase to 7.0%. With the mixed waste/high diversion system, debt charges may increase to 7.3%. This is shown in Table 5.5.4.

Table 5.5.4

**Effect of Diversion Costs on
Municipal Debt Charges**

| | Existing Debt Charges as a Percent of Expenditures | Future Debt Charges as a Percent of Expenditures |
|---------------------------------|--|--|
| Existing | 5.2% | 5.2% |
| Committed | 5.2% | 7.0% |
| Direct Cost (Revenue Neutral) A | 5.2% | 7.0% |
| Direct Cost (Added Revenue) B | 5.2% | 7.0% |
| Expanded Blue Box | 5.2% | 7.0% |
| Wet/Dry | 5.2% | 7.0% |
| Mixed Waste (Low Diversion) A | 5.2% | 7.0% |
| Mixed Waste (High Diversion) B | 5.2% | 7.3% |

Source: Future Urban Research

Debt capacity calculations (the ratio of debt charges to operating expenditures) determine the amount of available debt permitted by the Ministry of Municipal Affairs (former OMB guideline). When estimating debt capacity, using a 9% interest rate and a ten year term, the total debt capacity for Peel Region approaches \$58.7 million (Table 5.5.5). Similar to the previous analysis, the capital costs for each reduce the Region's debt capacity to 66%. The mixed waste/high diversion system, however, absorbs the largest amount of debt capacity, leaving Peel with 64% of its debt capacity.

On an overall basis, when all of the debt factors are taken together, the existing system represents the highest ranked system as it carries no further capital costs. On the other hand, the mixed waste/high diversion system is the lowest ranked system since it incurs the highest capital cost. All other systems are second lowest ranked because they carry high capital costs but affect Peel's financing to a lesser extent.

Table 5.5.5
Effect of Diversion Costs
on Debt Capacity

| | Total Available Debt Capacity (\$000) | Current Remaining Debt Capacity (\$000) | Total Diversion Debt (\$000) | Percent Capacity Remaining |
|---------------------------------------|---|---|---------------------------------------|----------------------------------|
| Existing | \$586,750 | \$478,900 | 0 | 82% |
| Committed | 586,750 | 478,900 | 90,300 | 66% |
| Direct Cost (Revenue Neutral) A | 586,750 | 478,900 | 90,300 | 66% |
| Direct Cost (Added Revenue) B | 586,750 | 478,900 | 90,300 | 66% |
| Expanded Blue Box | 586,750 | 478,900 | 90,300 | 66% |
| Wet/Dry | 586,750 | 478,900 | 90,300 | 66% |
| Mixed Waste (Low Diversion) A | 586,750 | 478,900 | 91,000* | 66% |
| Mixed Waste (High Diversion) B | 586,750 | 478,900 | 105,000** | 64% |

* includes \$40 million reserve funding

** includes \$45 million reserve funding

Source: Future Urban Research

5.5.3 Potential Impact on Municipal Reserve Funds

As indicated in the debt section, the capital costs of the wet/dry system and both mixed waste systems are so large that reserve fund financing was used to offset some of the expenditure. This totalled \$10.0 million for the wet dry, \$39.0 million for the mixed waste/low diversion system and \$45.0 million for the mixed waste/high diversion system. While debt levels for the other systems are large and potentially subject to reserve contributions, the effect on taxes still remains relatively moderate without funding allocations. It was also shown under the system descriptions that the direct cost added revenue system had the capacity of generating a further \$10.0 million in extra revenue that could have been placed into reserves and used for other waste management/waste diversion activities.

As a result of this, the direct cost/added revenue system is the highest ranked since it adds to the Region's reserve fund position. Conversely, the mixed waste/high diversion system is the

lowest ranked because it absorbs the highest amount of reserve funds. Similarly, the mixed waste/low diversion system is second lowest ranked system and the wet/dry system is the third lowest. The remaining systems: the existing, the committed, the direct cost/revenue neutral and the expanded Blue Box systems are the second highest ranked systems because they do not impact the reserve fund.

5.5.4 Potential Impact on the Level of Municipal Services

As indicated above, the annualized cost effect of the diversion systems have a low to medium impact on household taxation. Therefore, the analysis did not consider reductions in the delivery of service for other municipal departments to help fund diversion costs. Therefore, there would be no impact on functional service levels in the municipalities.

5.5.5 Potential Impact on the Provincial Treasury

The above analysis is presented in the absence of mitigation. During the course of this study, it was found that reliance on this criteria had to be lessened. Due to budget and social contract considerations, the amount of grant funding beyond the current Provincial fiscal year is uncertain. In the extreme, the Province may find it necessary to address the funding assistance of each 3R's alternative examined in this study on a case-by-case basis. Due to this, evaluations under this criteria became indeterminate. Actual resolution may possibly depend on actual funding negotiations with each Region.

Notwithstanding this, and pending funding arrangements with Peel Region, it could be assumed that 30% of the capital costs of the alternative systems could be funded externally. While the primary source of funds may be Provincial grants, the assumption does not exclude the possibility of other private funding sources. If this were the case, the alternative systems in Peel may be funded as follows:

| | |
|-------------------|----------------|
| Existing | 0 |
| Committed | \$30.0 million |
| Direct Cost A | 30.0 million |
| Direct Cost B | 30.0 million |
| Expanded Blue Box | 30.0 million |
| Wet/Dry | 33.6 million |
| Mixed Waste A | 43.0 million |
| Mixed Waste B | 58.3 million |

5.5.6 Potential Impact on Private Sector Industries

Assuming the continuation of existing municipal funding mechanisms, the effects analysis does not consider that there would be direct impacts on the private sector to offset costs related to the diversion commitment (apart from a possible mitigation scenario shown as part of the Impact on the Provincial Treasury). However, there does exist an indirect taxation effect. That is, a portion of diversion costs are levied in local taxes.

Table 5.5.6
System Effects on Business Taxes

| | Total Existing Business Taxes (\$000) | Total Added Taxes Due To Diversion (\$000) | Percent Increase |
|------------------------------------|---|---|---------------------|
| Existing | \$124,809 | \$1,748 | 1% |
| Committed | 124,809 | 8,195 | 5% |
| Direct Cost (Revenue Neutral) A | 124,809 | 4,009 | 2% |
| Direct Cost (Added Revenue) B | 124,809 | 4,009 | 2% |
| Expanded Blue Box | 124,809 | 9,220 | 6% |
| Wet/Dry | 124,809 | 8,792 | 5% |
| Mixed Waste (Low Diversion) A | 124,809 | 14,273 | 9% |
| Mixed Waste (High Diversion) B | 124,809 | 11,907 | 7% |

Source: Future Urban Research

Table 5.5.6 shows the level of private sector taxation in Peel for each diversion system. While taxes currently collected from the business sector now approach \$125 million. Tax charges for each system begin at 1% for existing; 2% for both direct cost systems (added revenue bag charges are only residually related); 5% for committed and wet/dry; and expanded Blue Box; 7% for mixed waste/high diversion and 9% for the mixed waste/low diversion system.

As a result, the existing system is the highest ranked. The direct cost systems are the second highest ranked. The expanded Blue Box, the committed and the wet/dry systems are third

highest ranked. Conversely, the mixed waste/low diversion system is lowest ranked and the mixed waste/high diversion system is second lowest ranked.

5.5.7 Summary of Effects Analysis

The following summarizes the above effects by criteria and indicator for Peel Region and this is shown on Table 5.5.7.

The existing system is highest ranked. The existing system represents the least cost to the tax payers in Peel and does not present any debt costs to the financial structure. The committed, direct cost, expanded Blue Box and wet dry systems are the second highest ranked systems.

The mixed waste/high diversion system is the lowest ranked because it represents the highest tax effects and also the highest capital cost. Similarly, while less burdensome, the mixed waste/low diversion system also represents the second lowest ranked system.

Table 6.6.7

SYSTEM NET EFFECTS TABLE BY INDICATOR

PEEL

| | Existing | Committed | Direct Cost A | Direct Cost B | Expanded Blue Box | Wet/Dry | Mixed Waste a | Mixed Waste b |
|--------------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| System Ranking | Highest Ranked | Second Highest Ranked | Second Highest Ranked | Second Highest Ranked | Second Highest Ranked | Second Highest Ranked | Second Lowest Ranked | Lowest Ranked |
| Impact on Local Taxpayers | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Tax Levy | 3,568,000 | 18,723,800 | 18,589,200 | 28,589,200 | 18,817,000 | 17,943,800 | 29,128,300 | 24,299,400 |
| Tax Per Household | 6 | 28 | 31 | 46 | 31 | 30 | 47 | 40 |
| | 1% | 3% | 3% | 5% | 3% | 3% | 5% | 4% |
| Impact on Municipal Debt Burden | 1 | 2 | 4 | 2 | 2 | 2 | 2 | 2 |
| Amount of Debt | 0 | 90,300,000 | 90,300,000 | 90,300,000 | 90,300,000 | 90,300,000 | 91,000,000 | 105,000,000 |
| Debt Payments | 0 | 14,100,000 | 14,100,000 | 14,100,000 | 14,100,000 | 14,100,000 | 14,200,000 | 16,400,000 |
| Debt Capacity | 62% | 66% | 66% | 66% | 66% | 66% | 66% | 64% |
| Impact on Municipal Reserves | 2 | 2 | 1 | 2 | 6 | 7 | 8 | 8 |
| Total Reserves | 0 | 0 | 0 | 10,000,000 | 0 | -10,000,000 | -39,000,000 | -45,000,000 |
| Reserves/Household | 0 | 0 | 0 | 43 | 0 | -43 | -170 | -195 |
| Reserves/Expenses | 0 | 0 | 0 | 67% | 0% | -67% | -360% | -400% |
| Impact on Municipal Level of Service | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Operating Cost | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Expense/Household | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Impact on Provincial Treasury | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements | pending funding arrangements |
| Impact on Private Sector Industries | 1 | 4 | 1 | 4 | 4 | 8 | 8 | 8 |
| Private Funding Costs | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Higher Prices | no effect | no effect | no effect | no effect | no effect | no effect | no effect | no effect |
| Private Taxes | 1% | 5% | 2% | 2% | 6% | 5% | 9% | 7% |

5.5.8 Sensitivity Analysis

To confirm this ranking, the municipal finance component also undertook a sensitivity analysis on the key variables that may affect the criteria and indicators. The sensitivity analysis examined variations in capital costs (plus or minus 10% and 20%), rates of waste diversion (plus or minus 5%), variations in operating cost (plus or minus 5% and 10%) and finally, household growth including a no growth scenario. While changing the value of the indicators shown above, the sensitivity analysis shows that, given the ranges tested, the general ranking of the systems shown above would not significantly change.

Table 5.5.8

SENSITIVITY ANALYSIS

| PEEL | Existing | Committed | Direct Cost A | Direct Cost B | Expanded | Wet/Dry | Mixed a | Mixed b |
|------------------|----------|-----------|---|------------------|----------|---------|---------|---------|
| Net Annual Costs | 3,568 | 16,724 | 18,589 | 28,589 | 18,817 | 17,944 | 29,128 | 24,299 |
| Capital Costs | | | | | | | | |
| 10% | 3,568 | 18,130 | 19,996 | 29,996 | 20,224 | 19,350 | 30,546 | 25,935 |
| 20% | 3,568 | 19,538 | 21,403 | 31,403 | 21,631 | 20,757 | 31,964 | 27,572 |
| -10% | 3,568 | 15,317 | 17,182 | 27,182 | 17,410 | 16,537 | 27,710 | 22,663 |
| -20% | 3,568 | 13,910 | 15,775 | 25,775 | 16,003 | 15,130 | 26,292 | 21,027 |
| | | | no change in ranking | | | | | |
| Diversion Rate | | | | | | | | |
| 5% n/a | | 15,200 | 17,065 | 27,065 | 17,293 | 16,420 | 27,604 | 22,775 |
| -5% n/a | | 18,247 | 20,113 | 30,113 | 20,341 | 19,468 | 30,652 | 25,873 |
| | | | no change in ranking | | | | | |
| Operating Cost | | | | | | | | |
| 5% | 3,568 | 17,237 | 19,516 | 29,516 | 19,786 | 19,128 | 30,882 | 26,053 |
| 10% | 3,568 | 17,751 | 20,443 | 30,443 | 20,755 | 20,313 | 32,635 | 27,806 |
| -5% | 3,568 | 16,210 | 17,662 | 27,662 | 17,848 | 16,759 | 27,375 | 22,546 |
| | | | no change in ranking | | | | | |
| Cost Per Tonne | | | | | | | | |
| + \$40 | 1,536 | 13,676 | 12,981 | 22,981 | 12,965 | 10,019 | 21,082 | 13,449 |
| 20 | 2,552 | 15,200 | 15,785 | 25,785 | 19,891 | 13,981 | 25,105 | 18,874 |
| | | | higher disposal fees favour direct cost and mixed waste b | | | | | |
| Household Growth | | | | | | | | |
| analysis | 1% | 3% | 3% | 5% | 3% | 3% | 5% | 4% |
| no growth | 1% | 4% | 5% | 7% | 5% | 5% | 7% | 6% |
| | | | no change in ranking | | | | | |

Source: Future Urban Research

5.6 System Effects Summary

Tables 5.6.1 and 5.6.2 summarize the above ranking process for all Regions. Table 5.6.1 indicates each Region's effects analysis according to the ranking. Table 5.6.2 compares selected criteria indicators for each diversion system. Also, a reconciliation of costs from this analysis is made to the costs used in the analysis undertaken by Resource Integration Systems Ltd. This is shown in Schedule F.

Table 5.6.1

SYSTEM NET EFFECTS SUMMARY TABLE

| System | Durham | Metro | York | Peel |
|-------------------------------|--|---|------------------------------------|---|
| Highest Ranked | Existing Direct Cost A Direct Cost B | Existing | Existing | Existing |
| Second Highest Ranked | Committed | Committed | Committed Direct Cost A | Committed Direct Cost A Direct Cost B Expanded Blue Wet/Dry |
| Third Highest Ranked | Expanded Blue | Direct Cost A Direct Cost B Expanded Blue | Direct Cost B Expanded Blue | |
| Third Lowest Ranked | Wet/Dry | Wet/Dry | | |
| Second Lowest Ranked | Mixed Waste b | Mixed Waste b | Wet/Dry | Mixed Waste a |
| Lowest Ranked | Mixed Waste a | Mixed waste a | Mixed Waste a Mixed Waste b | Mixed Waste b |
| Source: Future Urban Research | | | | |

Table 5.6.2

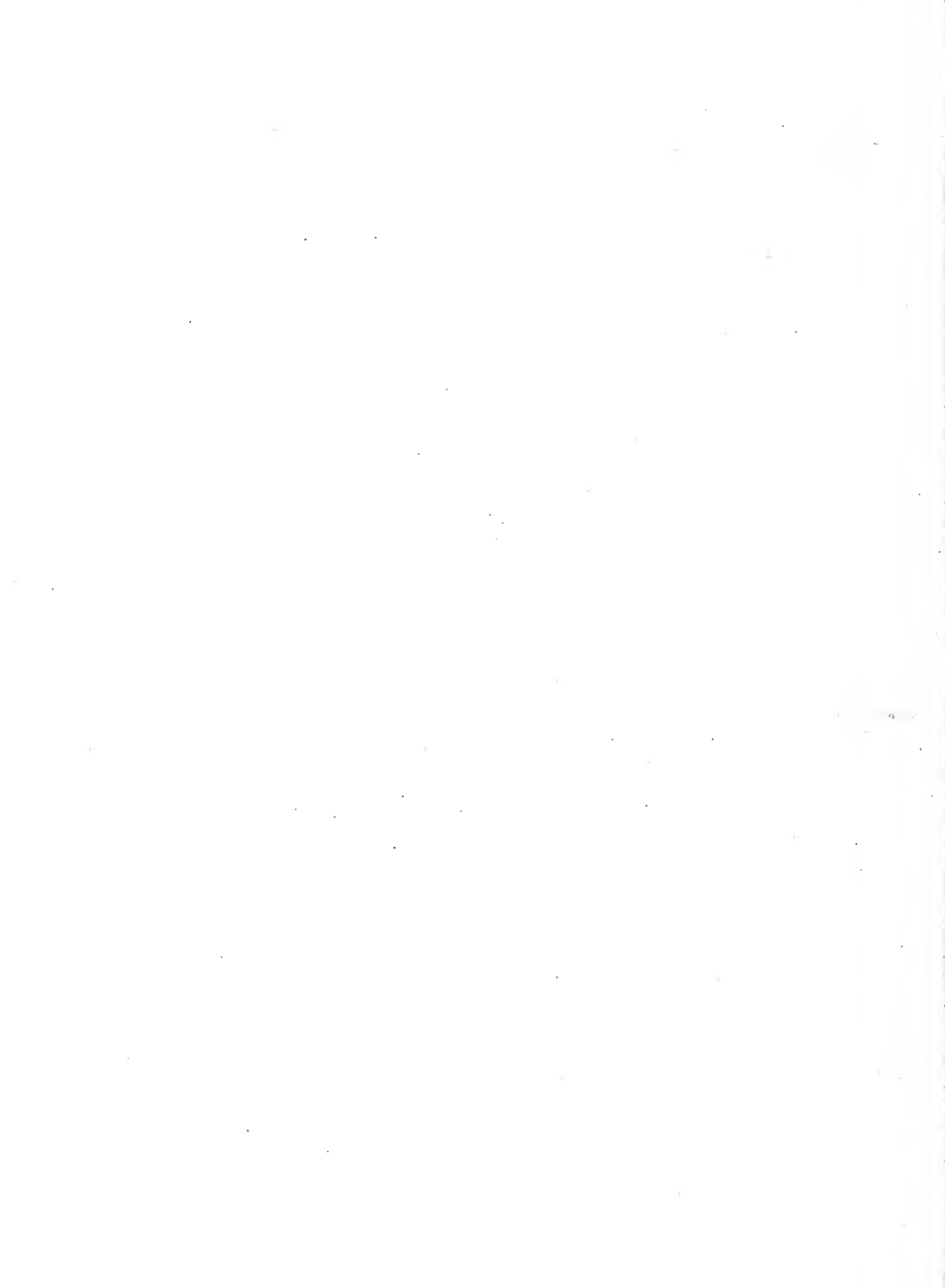
REGIONAL SYSTEM NET EFFECTS BY SELECTED INDICATORS

| | Durham | Metro | York | Peel |
|-------------------------------|-----------|-------------|------------|------------|
| Existing | | | | |
| Tax Per Household | 9 | 13 | 10 | 8 |
| Amount of Debt | 0 | 0 | 0 | 0 |
| Reserves | 0 | 0 | 0 | 0 |
| Level of Service | n/e | n/e | n/e | n/e |
| Provincial Funding | pending | pending | pending | pending |
| Private Sector Taxes | 1% | 1% | 1% | 1% |
| Committed | | | | |
| Tax Per Household | 11 | 23 | 12 | 28 |
| Amount of Debt | 3,856,000 | 135,681,000 | 2,785,000 | 90,300,000 |
| Reserves | 0 | 0 | 0 | 0 |
| Level of Service | n/e | n/e | n/e | n/e |
| Provincial Funding | pending | pending | pending | pending |
| Private Sector Taxes | 2% | 2% | 1% | 5% |
| Direct Cost A | | | | |
| Tax Per Household | 9 | 31 | 12 | 31 |
| Amount of Debt | 3,856,000 | 135,681,000 | 2,785,000 | 90,300,000 |
| Reserves | 0 | 0 | 0 | 0 |
| Level of Service | n/e | n/e | n/e | n/e |
| Provincial Funding | pending | pending | pending | pending |
| Private Sector Taxes | 1% | 3% | 1% | 2% |
| Direct Cost B | | | | |
| Tax Per Household | 19 | 54 | 32 | 46 |
| Amount of Debt | 3,856,000 | 135,681,000 | 2,785,000 | 90,300,000 |
| Reserves | 1,500,000 | 45,000,000 | 6,500,000 | 10,000,000 |
| Level of Service | n/e | n/e | n/e | n/e |
| Provincial Funding | pending | pending | pending | pending |
| Private Sector Taxes | 1% | 3% | 1% | 2% |
| Expanded Blue | | | | |
| Tax Per Household | 14 | 31 | 17 | 31 |
| Amount of Debt | 9,000,000 | 135,681,000 | 10,000,000 | 90,300,000 |
| Reserves | 0 | 0 | 0 | 0 |
| Level of Service | n/e | n/e | n/e | n/e |
| Provincial Funding | pending | pending | pending | pending |
| Private Sector Taxes | 3% | 3% | 2% | 6% |
| Source: Future Urban Research | | | | |

Table 5.6.2

REGIONAL SYSTEM NET EFFECTS BY SELECTED INDICATORS

| | | Durham | Metro | York | Peel |
|--------------------------------------|-----------------------------|------------|-------------|------------|-------------|
| Wet/Dry | Tax Per Household | 27 | 23 | 53 | 30 |
| | Amount of Debt | 39,500,000 | 166,781,000 | 45,000,000 | 90,300,000 |
| | Reserves | 0 | 0 | 0 | -10,000,000 |
| | Level of Service | n/e | n/e | n/e | n/e |
| | Provincial Funding | pending | pending | pending | pending |
| | Private Sector Taxes | 6% | 2% | 7% | 5% |
| Mixed Waste a | Tax Per Household | 33 | 72 | 77 | 47 |
| | Amount of Debt | 50,000,000 | 240,984,000 | 57,785,000 | 91,000,000 |
| | Reserves | 0 | -25,000,000 | 0 | -39,000,000 |
| | Level of Service | n/e | n/e | n/e | n/e |
| | Provincial Funding | pending | pending | pending | pending |
| | Private Sector Taxes | 7% | 7% | 11% | 9% |
| Mixed Waste b | Tax Per Household | 23 | 60 | 66 | 44 |
| | Amount of Debt | 50,000,000 | 265,984,000 | 57,785,000 | 105,000,000 |
| | Reserves | 0 | -50,000,000 | 0 | -45,000,000 |
| | Level of Service | n/e | n/e | n/e | n/e |
| | Provincial Funding | pending | pending | pending | pending |
| | Private Sector Taxes | 5% | 6% | 9% | 7% |
| Source: Future Urban Research | | | | | |



SCHEDULE A:
DETAILED MUNICIPAL
FINANCE PROFILES

REGION OF DURHAM

MOE 3Rs ALTERNATIVE ANALYSIS IN SUPPORT OF IWA
MUNICIPAL FINANCE ASSESSMENT – FUTURE URBAN RESEARCH

| REGION OF DURHAM POPULATION | | | | | | | | | | TOTAL | |
|--|-----------|-----------|-----------|-----------|-----------|---------|-----------|-----------|--|------------|--|
| RMD | Oshawa | Ajax | Newcastle | Pickering | Whitby | Brock | Scugog | Uxbridge | | | |
| 347,837 | 120,904 | 45,046 | 37,769 | 56,132 | 49,948 | 10,082 | 15,675 | 12,281 | | 347,837 | |
| HOUSEHOLDS | | | | | | | | | | TOTAL | |
| 136,322 | 47,720 | 17,135 | 15,982 | 20,128 | 19,266 | 4,468 | 6,700 | 4,923 | | 136,322 | |
| Population per Household | | | | | | | | | | TOTAL | |
| 2.55 | 2.53 | 2.63 | 2.36 | 2.79 | 2.59 | 2.26 | 2.34 | 2.49 | | 2.55 | |
| EQUALIZED TAXABLE ASSESSMENT | | | | | | | | | | TOTAL | |
| 25,213,000 | 7,701,000 | 3,335,000 | 2,710,000 | 4,636,000 | 3,894,000 | 681,000 | 1,158,000 | 1,099,000 | | 25,214,000 | |
| Residential Portion Percentage Commercial/Other Portion Percentage | | | | | | | | | | TOTAL | |
| 74.2 | 58.9 | 79.6 | 85.1 | 79.6 | 75.6 | 88.2 | 89.3 | 87.2 | | 74.2 | |
| 25.8 | 41.1 | 20.4 | 14.9 | 20.4 | 24.4 | 11.8 | 10.7 | 12.8 | | 25.8 | |
| REVENUE | | | | | | | | | | TOTAL | |
| Municipal Property Taxation | | | | | | | | | | TOTAL | |
| 0 | 39,485 | 17,826 | 13,052 | 19,678 | 19,666 | 3,795 | 5,505 | 5,013 | | 124,020 | |
| Residential & Farm | | | | | | | | | | TOTAL | |
| 0 | 32,219 | 5,737 | 2,775 | 6,508 | 7,716 | 609 | 821 | 886 | | 57,271 | |
| Commercial, Industrial & Business | | | | | | | | | | TOTAL | |
| 0 | 1,815 | 430 | 2,803 | 1,397 | 649 | 191 | 218 | 271 | | 7,774 | |
| Other Special Charges | | | | | | | | | | TOTAL | |
| 0 | 73,519 | 23,993 | 18,630 | 27,583 | 28,031 | 4,595 | 6,544 | 6,170 | | 189,065 | |
| Property Taxation | | | | | | | | | | TOTAL | |
| 126,867 | 47,158 | 14,524 | 10,561 | 13,677 | 15,871 | 2,749 | 3,469 | 3,249 | | 238,125 | |
| Unconditional Grants | | | | | | | | | | TOTAL | |
| 17,740 | 4,854 | 792 | 791 | 1,049 | 1,004 | 309 | 304 | 228 | | 27,071 | |
| Conditional Grants | | | | | | | | | | TOTAL | |
| 76,429 | 4,679 | 1,048 | 1,641 | 2,263 | 1,813 | 625 | 893 | 658 | | 90,049 | |
| Payments in Lieu of Taxes | | | | | | | | | | TOTAL | |
| 0 | 2,348 | 269 | 1,195 | 5,353 | 1,394 | 99 | 116 | 217 | | 10,991 | |
| Fees & Service Charges | | | | | | | | | | TOTAL | |
| 26,140 | 11,549 | 2,576 | 1,951 | 4,326 | 3,510 | 465 | 564 | 799 | | 51,880 | |
| Program Revenues | | | | | | | | | | TOTAL | |
| 75,466 | 5,518 | 3,552 | 3,679 | 5,672 | 4,186 | 353 | 544 | 939 | | 99,909 | |
| 322,642 | 76,106 | 22,761 | 19,818 | 32,340 | 27,778 | 4,600 | 5,890 | 6,090 | | 518,025 | |
| ASSESSMENT & TAX | | | | | | | | | | TOTAL | |
| Levy – Local | | | | | | | | | | TOTAL | |
| 62,198 | | | | 481.03 | | | | | | 140,643 | |
| Levy – Regional | | | | | | | | | | TOTAL | |
| 126,867 | | | | 341.12 | | | | | | 57,271 | |
| Levy – School Board | | | | | | | | | | TOTAL | |
| 221,054 | | | | 961.25 | | | | | | 83,372 | |
| Total Tax Levy | | | | | | | | | | TOTAL | |
| 410,119 | | | | 1,783.40 | | | | | | 281,286 | |
| Long – Term Debt Outstanding | | | | | | | | | | TOTAL | |
| 21,840 | 5,683 | 691 | 5,590 | 979 | 408 | 51 | 0 | 51 | | 35,293 | |
| Debt Charges | | | | | | | | | | TOTAL | |
| 7,634 | 1,302 | 222 | 988 | 392 | 119 | 131 | 63 | 33 | | 10,884 | |
| Reserves/Reserve Funds | | | | | | | | | | TOTAL | |
| 101,633 | 35,766 | 10,262 | 14,327 | 13,409 | 18,471 | 1,820 | 1,705 | 1,909 | | 199,302 | |

Average Residential Share of Tax Levy per Household

| | |
|-----------------------|-----------------|
| – Local | 481.03 |
| – Regional | 341.12 |
| – School Board | 961.25 |
| Total Tax Levy | 1,783.40 |

| | |
|-------------------------------|---------|
| Property Taxation | 140,643 |
| Comm., Bus., Ind. Residential | 57,271 |
| % Bus to Total | 281,286 |

REGION OF DURHAM

OPERATING EXPENDITURES

| | RMD | Oshawa | Ajax | Newcastle | Pickering | Whitby | Brock | Scugog | Uxbridge | TOTAL | % of Total |
|--------------------------|---------|--------|--------|-----------|-----------|--------|-------|--------|----------|---------|---------------|
| General Government | 11,037 | 10,570 | 4,146 | 4,517 | 6,708 | 5,477 | 1,050 | 1,170 | 1,208 | 45,893 | 9.6 |
| Protection | 44,943 | 13,273 | 4,426 | 2,502 | 6,303 | 5,396 | 634 | 684 | 576 | 78,737 | 16.6 |
| Transportation | 21,805 | 25,404 | 6,289 | 6,236 | 8,255 | 8,794 | 1,832 | 2,616 | 2,405 | 83,626 | 17.6 |
| Environmental | 42,522 | 699 | 26 | 43 | 26 | 214 | 0 | 0 | 34 | 43,554 | 9.2 |
| - Sewer | 28,352 | 0 | 0 | 0 | 199 | 0 | 0 | 0 | 0 | 28,551 | 6.0 |
| - Water | 22,690 | 1,884 | 729 | 1,701 | 649 | 1,178 | 121 | 341 | 192 | 29,485 | 6.2 |
| - Solid Waste | 102,416 | 1,535 | 55 | 136 | 182 | 265 | 74 | 37 | 0 | 104,700 | 22.0 |
| Health & Social Services | 0 | 19,846 | 5,797 | 4,018 | 9,435 | 5,620 | 893 | 967 | 1,446 | 48,022 | 10.1 |
| Recreation | 3,748 | 4,048 | 957 | 1,475 | 864 | 1,433 | 231 | 171 | 221 | 13,148 | 2.8 |
| Planning | 277,513 | 77,259 | 22,425 | 20,628 | 32,621 | 28,367 | 4,835 | 5,986 | 6,082 | 475,716 | 100.0 |
| TOTAL | | | | | | | | | | | |

CAPITAL FUND REVENUES

| | | | | | | | | | | | |
|--------------------------|--------|--------|--------|-------|-------|--------|-------|-------|-------|---------|-------|
| Revenue Fund | 37,521 | 6,025 | 1,951 | 1,431 | 2,584 | 554 | 871 | 447 | 1,328 | 52,712 | 38.4 |
| Reserves & Reserve Funds | 13,726 | 9,174 | 9,019 | 5,336 | 3,022 | 11,005 | 573 | 307 | 851 | 53,013 | 38.6 |
| Long Term Borrowing | 610 | 0 | 0 | 16 | 0 | 7,000 | 33 | 8 | 0 | 7,667 | 5.6 |
| Ontario Grants | 8,740 | 1,814 | 1,115 | 1,160 | 791 | 3,587 | 941 | 309 | 807 | 19,264 | 14.0 |
| Other Sources | 1,014 | 1,317 | 1,887 | 113 | 64 | 60 | 0 | 22 | 51 | 4,528 | 3.3 |
| TOTAL | 61,611 | 18,330 | 13,972 | 8,056 | 6,461 | 22,206 | 2,418 | 1,093 | 3,037 | 137,184 | 100.0 |

CAPITAL FUND EXPENDITURES

| | | | | | | | | | | | |
|--------------------------|--------|--------|--------|-------|-------|--------|-------|-------|-------|---------|-------|
| General Government | 1,609 | 1,538 | 499 | 507 | 1,966 | 181 | 23 | 34 | 988 | 7,345 | 5.3 |
| Protection | 1,657 | 259 | 506 | 1,030 | 1,253 | 1,033 | 223 | 250 | 125 | 6,336 | 4.6 |
| Transportation | 18,952 | 17,610 | 4,015 | 4,916 | 2,285 | 7,302 | 1,527 | 420 | 2,133 | 59,160 | 42.9 |
| Environmental | 12,159 | 736 | 0 | 0 | 524 | 249 | 0 | 0 | 0 | 13,668 | 9.9 |
| - Sewer | 10,969 | 137 | 0 | 0 | 32 | 11 | 0 | 0 | 0 | 11,149 | 8.1 |
| - Water | 5,124 | 0 | 0 | 0 | 0 | 346 | 0 | 0 | 0 | 5,470 | 4.0 |
| - Solid Waste | 2,712 | 20 | 0 | 19 | 8 | 17 | 1 | 0 | 0 | 2,777 | 2.0 |
| Health & Social Services | 0 | 7,389 | 9,938 | 1,368 | 3,109 | 6,458 | 809 | 121 | 476 | 29,668 | 21.5 |
| Recreation | 209 | 586 | 214 | 167 | 20 | 456 | 372 | 223 | 0 | 2,247 | 1.6 |
| Planning | 53,391 | 28,275 | 15,172 | 8,007 | 9,197 | 16,053 | 2,955 | 1,048 | 3,722 | 137,820 | 100.0 |
| TOTAL | | | | | | | | | | | |

PER HOUSEHOLD DATA

| | | | | | | | | | | | |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|--|
| Revenue Fund Expenditures | 2,036 | 1,619 | 1,309 | 1,291 | 1,621 | 1,472 | 1,082 | 893 | 1,236 | 3,490 | |
| Capital Fund Expenditures | 392 | 593 | 885 | 501 | 457 | 833 | 661 | 156 | 756 | 1,011 | |
| Municipal Taxes | 0 | 785 | 936 | 692 | 914 | 957 | 640 | 694 | 831 | 209 | |
| Special Charges | 234 | 8 | 2 | 147 | 23 | 4 | 23 | 6 | 32 | 216 | |
| School | 0 | 798 | 1,083 | 1,041 | 1,348 | 1,183 | 754 | 978 | 1,157 | | |

METROPOLITAN TORONTO

| METROPOLITAN TORONTO & REGION | | | | | | | | |
|-------------------------------------|-------------|------------|------------|-------------|------------|-----------|-----------|-------------|
| | Metro | Toronto | Etobicoke | Scarborough | North York | York | East York | TOTAL |
| <u>POPULATION</u> | 2,133,559 | 597,126 | 293,433 | 470,406 | 544,560 | 131,537 | 96,497 | 2,133,559 |
| <u>HOUSEHOLDS</u> | 884,421 | 286,218 | 116,467 | 174,530 | 205,989 | 56,266 | 44,951 | 884,421 |
| Population per Household | 2.41 | 2.09 | 2.52 | 2.70 | 2.64 | 2.34 | 2.15 | 2.41 |
| <u>EQUALIZED TAXABLE ASSESSMENT</u> | 241,897,000 | 95,251,000 | 34,700,000 | 38,486,000 | 57,275,000 | 8,588,000 | 7,597,000 | 241,897,000 |
| Residential Portion Percentage | 53.1 | 42.1 | 53.8 | 62.2 | 59.2 | 73.3 | 72.8 | 53.1 |
| Commercial/Other Portion Percentage | 46.9 | 57.9 | 46.2 | 37.8 | 40.8 | 26.7 | 27.2 | 46.9 |
| <u>REVENUE</u> | | | | | | | | |
| Municipal Property Taxation | | 255,189 | 109,595 | 154,126 | 201,076 | 46,848 | 37,432 | 804,266 |
| Residential & Farm | 0 | 458,402 | 113,390 | 116,435 | 169,982 | 21,103 | 17,557 | 896,869 |
| Commercial, Industrial & Business | 0 | 10,902 | 2,749 | 4,518 | 5,391 | 1,260 | 940 | 25,760 |
| Other Special Charges | 0 | 724,493 | 225,734 | 275,079 | 376,449 | 69,211 | 55,929 | 1,726,895 |
| TOTAL | | | | | | | | |
| Property Taxation | 1,142,176 | 362,061 | 105,894 | 142,176 | 184,457 | 43,745 | 33,177 | 2,013,686 |
| Unconditional Grants | 136,266 | 24,978 | 6,706 | 10,943 | 11,311 | 5,988 | 2,812 | 199,004 |
| Conditional Grants | 745,451 | 28,118 | 9,805 | 14,759 | 15,909 | 4,672 | 4,693 | 823,407 |
| Payments in Lieu of Taxes | 0 | 76,236 | 14,648 | 22,127 | 24,579 | 2,037 | 1,389 | 141,016 |
| Fees & Service Charges | 757,827 | 64,821 | 14,629 | 10,478 | 30,427 | 2,938 | 1,853 | 882,973 |
| Program Revenues | 268,382 | 174,964 | 64,464 | 81,984 | 114,056 | 20,252 | 16,206 | 740,308 |
| TOTAL | 3,050,102 | 731,178 | 216,146 | 282,467 | 380,739 | 79,632 | 60,130 | 4,800,394 |
| <u>ASSESSMENT & TAX</u> | | | | | | | | |
| Levy – Local | 584,719 | | | | | 246.04 | | |
| – Regional | 1,142,176 | | | | | 620.73 | | |
| – School Board | 2,119,195 | | | | | 1,151.70 | | |
| Total Tax Levy | 3,846,090 | | | | | 2,018.47 | | |
| Long–Term Debt Outstanding | 430,464 | 133,954 | 43,205 | 13,840 | 36,274 | 15,940 | 23,341 | 697,018 |
| Debt Charges | 127,175 | 32,533 | 9,419 | 5,450 | 9,597 | 4,520 | 4,441 | 193,135 |
| Reserves/Reserve Funds | 394,673 | 298,158 | 50,681 | 113,321 | 106,627 | 12,384 | 10,710 | 986,554 |

METROPOLITAN TORONTO & REGION

OPERATING EXPENDITURES

| | Metro | Toronto | Etobicoke | Scarborough | North York | York | East York | % of Total |
|--------------------------|-----------|---------|-----------|-------------|------------|--------|-----------|---------------|
| General Government | 200,458 | 168,962 | 23,135 | 41,531 | 41,716 | 9,824 | 8,797 | 10.9 |
| Protection | 523,889 | 109,312 | 32,368 | 41,000 | 53,888 | 15,037 | 10,526 | 17.4 |
| Transportation | 867,969 | 90,856 | 26,212 | 39,622 | 48,176 | 11,447 | 6,339 | 24.1 |
| Environmental | 126,037 | 17,936 | 6,625 | 7,327 | 13,534 | 3,122 | 1,915 | 3.9 |
| - Sewer | 68,204 | 18,338 | 14,196 | 13,755 | 20,683 | 4,499 | 1,038 | 3.1 |
| - Water | 196,195 | 31,074 | 8,615 | 9,747 | 18,849 | 3,573 | 2,883 | 6.0 |
| - Solid Waste | 924,510 | 41,370 | 8,244 | 11,464 | 16,951 | 5,023 | 4,621 | 22.4 |
| Health & Social Services | 150,862 | 123,940 | 44,848 | 55,645 | 82,847 | 12,334 | 11,107 | 10.6 |
| Recreation | 17,057 | 35,223 | 3,599 | 7,418 | 4,965 | 1,383 | 1,087 | 1.6 |
| Planning | 3,075,181 | 637,011 | 167,842 | 227,809 | 301,609 | 66,242 | 48,313 | 100.0 |
| TOTAL | | | | | | | | |

CAPITAL FUND REVENUES

| | | | | | | | | |
|--------------------------|---------|---------|--------|--------|--------|--------|--------|-------|
| Revenue Fund | 119,439 | 12,678 | 4,194 | 8,552 | 28,094 | 1,874 | 309 | 26.3 |
| Reserves & Reserve Funds | 98,101 | 26,484 | 5,893 | 19,292 | 9,432 | 3,448 | 7,086 | 25.5 |
| Long Term Borrowing | 35,554 | 17,836 | 7,510 | 0 | 7,684 | 1,220 | 6,056 | 11.4 |
| Ontario Grants | 130,886 | 7,970 | 4,684 | 3,635 | 6,160 | 3,516 | 1,820 | 23.8 |
| Other Sources | 30,998 | 52,728 | 695 | 1,048 | 1,676 | 0 | 197 | 13.1 |
| TOTAL | 414,878 | 117,696 | 22,976 | 32,527 | 53,046 | 10,058 | 15,468 | 100.0 |

CAPITAL FUND EXPENDITURES

| | | | | | | | | |
|--------------------------|---------|---------|--------|--------|--------|--------|--------|-------|
| General Government | 52,237 | 17,095 | 801 | 4,922 | 4,927 | 1,075 | 5,434 | 10.9 |
| Protection | 25,367 | 4,290 | 1,027 | 2,580 | 1,311 | 1,640 | 170 | 4.6 |
| Transportation | 193,046 | 25,300 | 11,161 | 7,902 | 24,069 | 6,157 | 3,784 | 34.1 |
| Environmental | 76,496 | 4,406 | 1,591 | 4,761 | 5,474 | 730 | 1,006 | 11.9 |
| - Sewer | 19,096 | 3,801 | 3,428 | 3,019 | 1,829 | 674 | 295 | 4.0 |
| - Water | 52,092 | 3,861 | 1,216 | 1,168 | 785 | 0 | 0 | 7.4 |
| - Solid Waste | 14,785 | 420 | 0 | 74 | 0 | 10 | 0 | 1.9 |
| Health & Social Services | 19,495 | 21,027 | 4,369 | 8,425 | 13,764 | 2,090 | 1,006 | 8.8 |
| Recreation | 237 | 129,392 | 0 | 565 | 0 | 878 | (145) | 16.4 |
| Planning | 452,851 | 209,592 | 23,593 | 33,416 | 52,159 | 13,254 | 11,550 | 100.0 |
| TOTAL | | | | | | | | |

PER HOUSEHOLD DATA

| | | | | | | | | |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Revenue Fund Expenditures | 3,477 | 2,226 | 1,441 | 1,305 | 1,464 | 1,177 | 1,075 | 5,115 |
| Capital Fund Expenditures | 512 | 732 | 203 | 191 | 253 | 236 | 257 | 900 |
| Municipal Taxes | 0 | 770 | 861 | 878 | 907 | 818 | 800 | |
| Special Charges | 0 | 155 | 176 | 113 | 121 | 176 | 150 | |
| School | 0 | 917 | 1,136 | 1,052 | 1,190 | 848 | 916 | |

REGION OF YORK

MUNICIPAL FINANCE ASSESSMENT – FUTURE URBAN RESEARCH

| REGION OF YORK | RMV | Aurora | Markham | Newmarket | Richmond Hill | Vaughan | Whitchurch Stouffville | East Guillembury | King | TOTAL |
|-------------------------------------|------------|-----------|------------|-----------|---------------|------------|---------------------------|---------------------|-----------|------------|
| POPULATION | 409,292 | 24,545 | 129,501 | 37,277 | 57,082 | 88,475 | 16,705 | 16,513 | 16,607 | 409,292 |
| HOUSEHOLDS | 149,036 | 9,081 | 42,930 | 13,121 | 24,380 | 29,194 | 6,228 | 5,629 | 5,936 | 149,036 |
| Population per Household | 2.75 | 2.70 | 3.02 | 2.84 | 2.34 | 3.03 | 2.68 | 2.93 | 2.80 | 2.75 |
| EQUALIZED TAXABLE ASSESSMENT | 49,697,000 | 2,579,000 | 15,913,000 | 3,306,000 | 7,753,000 | 13,064,000 | 1,847,000 | 1,294,000 | 1,924,000 | 49,697,000 |
| Residential Portion Percentage | 73.5 | 76.5 | 71.7 | 76.1 | 77.7 | 63.6 | 83.7 | 91.7 | 92.3 | 73.5 |
| Commercial/Other Portion Percentage | 26.5 | 23.5 | 28.3 | 23.9 | 22.3 | 36.4 | 16.3 | 8.3 | 7.7 | 26.5 |
| REVENUE | | | | | | | | | | |
| Municipal Property Taxation | | 0 | 8,978 | 37,327 | 9,272 | 25,415 | 5,622 | 4,306 | 4,902 | 133,582 |
| Residential & Farm | | 0 | 3,490 | 17,008 | 3,974 | 9,827 | 1,373 | 466 | 539 | 61,333 |
| Commercial, Industrial & Business | | 0 | 171 | 6,609 | 405 | 1,008 | 160 | 173 | 272 | 12,305 |
| Other Special Charges | | 0 | 12,639 | 60,944 | 13,651 | 36,250 | 7,155 | 4,945 | 5,713 | 207,220 |
| TOTAL | | | | | | | | | | |
| Property Taxation | 109,846 | 8,758 | 36,280 | 10,780 | 27,742 | 38,394 | 4,738 | 3,679 | 3,517 | 252,286 |
| Unconditional Grants | 17,818 | 472 | 1,952 | 1,014 | 1,508 | 2,125 | 291 | 378 | 232 | 26,889 |
| Conditional Grants | 41,203 | 789 | 4,642 | 1,143 | 3,151 | 3,411 | 671 | 746 | 852 | 57,806 |
| Payments in Lieu of Taxes | 0 | 250 | 888 | 375 | 271 | 750 | 111 | 63 | 122 | 2,978 |
| Fees & Service Charges | 5,482 | 1,930 | 13,008 | 4,148 | 3,956 | 12,268 | 1,009 | 642 | 965 | 44,441 |
| Program Revenues | 404 | 3,034 | 24,256 | 9,403 | 25,065 | 29,152 | 2,304 | 1,640 | 1,478 | 100,552 |
| TOTAL | 174,753 | 15,233 | 81,026 | 26,863 | 61,693 | 86,100 | 9,124 | 7,148 | 7,192 | 484,952 |

ASSESSMENT & TAX

| | | | | | |
|----------------|---------|---|--|--|--|
| Levy – Local | 97,374 | Average Residential Share of Tax Levy per Household | | | |
| – Regional | 109,846 | – Local | | | |
| – School Board | 405,855 | – Regional | | | |
| Total Tax Levy | 613,075 | – School Board | | | |
| | | Total Tax Levy | | | |
| | | 2,749.64 | | | |

| | | | | | | | | | | | |
|----------------------------|--------|--------|--------|-------|--------|--------|-------|-------|-------|-------|---------|
| Long–Term Debt Outstanding | 14,869 | 29 | 4,466 | 2,312 | 6,004 | 4,027 | 1,361 | 468 | 5,639 | 37 | 39,212 |
| Debt Charges | 3,007 | 16 | 1,193 | 715 | 1,744 | 1,038 | 347 | 103 | 985 | 35 | 9,183 |
| Reserves/Reserve Funds | 91,868 | 16,328 | 50,421 | 1,547 | 63,652 | 42,401 | 6,650 | 1,944 | 6,452 | 4,718 | 285,981 |

REGION OF YORK

OPERATING EXPENDITURES

| | RMV | Aurora | Markham | Newmarket | Richmond Hill | Vaughan | Whitchurch Stouffville | East Gullimbury | Georgina | King | TOTAL | % of Total |
|--------------------------|---------|--------|---------|-----------|---------------|---------|---------------------------|--------------------|----------|-------|---------|---------------|
| General Government | 6,211 | 2,099 | 7,953 | 4,378 | 10,692 | 10,585 | 1,454 | 1,132 | 2,316 | 944 | 47,764 | 10.9 |
| Protection | 51,510 | 1,696 | 13,425 | 2,311 | 6,352 | 11,999 | 1,148 | 647 | 1,574 | 1,000 | 91,662 | 20.9 |
| Transportation | 17,711 | 2,503 | 17,722 | 3,135 | 16,045 | 13,914 | 1,489 | 1,710 | 3,659 | 1,958 | 79,846 | 18.2 |
| Environmental | 21,413 | 84 | 875 | 310 | 3,553 | 4,284 | 305 | 71 | 581 | 6 | 31,482 | 7.2 |
| - Sewer | 20,282 | 1,755 | 3,146 | 1,027 | 1,824 | 3,166 | 467 | 317 | 767 | 247 | 32,998 | 7.5 |
| - Water | 0 | 975 | 5,903 | 2,313 | 2,216 | 5,701 | 873 | 526 | 1,264 | 1,037 | 20,808 | 4.8 |
| - Solid Waste | 53,751 | 0 | 19 | 0 | 309 | 175 | 46 | 0 | 113 | 1 | 54,414 | 12.4 |
| Health & Social Services | 124 | 3,775 | 19,249 | 6,027 | 10,245 | 19,148 | 2,121 | 1,350 | 2,960 | 1,515 | 66,514 | 15.2 |
| Recreation | 1,646 | 549 | 2,229 | 507 | 2,692 | 2,308 | 565 | 475 | 1,031 | 554 | 12,556 | 2.9 |
| Planning | 172,648 | 13,436 | 70,521 | 20,008 | 53,928 | 71,280 | 8,468 | 6,228 | 14,265 | 7,262 | 438,044 | 100.0 |
| TOTAL | | | | | | | | | | | | |

CAPITAL FUND REVENUES

| | | | | | | | | | | | | |
|--------------------------|--------|-------|--------|--------|--------|--------|-------|-------|-------|-------|---------|-------|
| Revenue Fund | 8,928 | 329 | 1,307 | 140 | 7,847 | 789 | 389 | 664 | 2,181 | 363 | 22,937 | 9.3 |
| Reserves & Reserve Funds | 16,622 | 5,736 | 28,939 | 11,485 | 32,512 | 23,776 | 1,544 | 3,101 | 1,065 | 1,212 | 125,992 | 51.2 |
| Long Term Borrowing | 47,859 | 1,500 | 4,890 | 0 | 0 | 0 | 0 | 0 | 2 | 9 | 54,260 | 22.1 |
| Ontario Grants | 9,287 | 716 | 3,844 | 944 | 1,558 | 4,485 | 457 | 381 | 823 | 324 | 22,819 | 9.3 |
| Other Sources | 6,441 | 0 | 124 | 77 | 3,989 | 7,854 | 126 | 0 | 636 | 727 | 19,974 | 8.1 |
| TOTAL | 89,137 | 8,281 | 39,104 | 12,646 | 45,906 | 36,904 | 2,516 | 4,146 | 4,707 | 2,635 | 245,982 | 100.0 |

CAPITAL FUND EXPENDITURES

| | | | | | | | | | | | | |
|--------------------------|--------|-------|--------|--------|--------|--------|-------|-------|-------|-------|---------|-------|
| General Government | 2,278 | 1,908 | 16,471 | 600 | 7,466 | 3,920 | 111 | 3,283 | 181 | 184 | 36,402 | 18.2 |
| Protection | 5,846 | 0 | 1,512 | 56 | 166 | 1,413 | 207 | 207 | 102 | 259 | 9,768 | 4.9 |
| Transportation | 27,788 | 1,353 | 11,758 | 2,041 | 6,045 | 16,649 | 831 | 524 | 1,904 | 510 | 69,403 | 34.7 |
| Environmental | 871 | 94 | 551 | 2,054 | 1,304 | 3,023 | 122 | 30 | 106 | 293 | 8,448 | 4.2 |
| - Water | 6,952 | 1,990 | 284 | 4,568 | 2,171 | 2,707 | 317 | 1,707 | 196 | 43 | 20,935 | 10.5 |
| - Solid Waste | 682 | 261 | 91 | 92 | 211 | 4 | 0 | 0 | 53 | 28 | 1,422 | 0.7 |
| Health & Social Services | 5,160 | 13 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 5,175 | 2.6 |
| Recreation | 0 | 1,148 | 3,844 | 2,798 | 12,783 | 22,732 | 540 | 183 | 3196 | 446 | 47,670 | 23.8 |
| Planning | 67 | 15 | 0 | 120 | 383 | 272 | 0 | 0 | 36 | 27 | 920 | 0.5 |
| TOTAL | 49,644 | 6,782 | 34,511 | 12,329 | 30,529 | 50,720 | 2,130 | 5,934 | 5,774 | 1,790 | 200,143 | 100.0 |

PER HOUSEHOLD DATA

| | | | | | | | | | | | | |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Revenue Fund Expenditures | 1,158 | 1,480 | 1,643 | 1,525 | 2,212 | 2,442 | 1,360 | 1,106 | 1,138 | 1,224 | | |
| Capital Fund Expenditures | 333 | 747 | 804 | 940 | 1,252 | 1,738 | 342 | 1,054 | 461 | 302 | | |
| Municipal Taxes | 0 | 882 | 810 | 612 | 954 | 894 | 763 | 663 | 578 | 720 | | |
| Special Charges | 0 | 86 | 257 | 242 | 327 | 413 | 47 | 117 | 197 | 91 | | |
| School | 0 | 1,396 | 1,826 | 1,242 | 1,655 | 1,912 | 1,401 | 1,224 | 836 | 1,876 | | |

REGION OF PEEL

MOE 3Rs ALTERNATIVE ANALYSYS IN SUPPORT OF IWA
MUNICIPAL FINANCE ASSESSMENT – FUTURE URBAN RESEARCH

| REGION OF PEEL POPULATION | RMP | Brampton | Mississauga | Caledon | TOTAL | % of Total |
|-------------------------------------|------------|------------|-------------|-----------|------------|---------------|
| | 608,327 | 192,045 | 385,156 | 31,126 | 608,327 | |
| <u>HOUSEHOLDS</u> | | | | | | |
| Population per Household | 2.71 | 2.74 | 2.70 | 2.79 | 2.71 | |
| <u>EQUALIZED TAXABLE ASSESSMENT</u> | 61,294,000 | 17,219,000 | 41,064,000 | 3,011,000 | 61,294,000 | |
| Residential Portion Percentage | 66.6 | 67.7 | 64.7 | 86.4 | 66.6 | |
| Commercial/Other Portion Percentage | 33.4 | 32.3 | 35.3 | 13.6 | 33.4 | |
| <u>REVENUE</u> | | | | | | |
| Municipal Property Taxation | | | | | | |
| Residential & Farm | 0 | 60,460 | 130,767 | 11,602 | 202,829 | 60.6 |
| Commercial, Industrial & Business | 0 | 35,058 | 87,521 | 2,230 | 124,809 | 37.3 |
| Other Special Charges | 0 | 1,612 | 4,341 | 1,070 | 7,023 | 2.1 |
| TOTAL | 0 | 97,130 | 222,629 | 14,902 | 334,661 | 100.0 |
| Property Taxation | 224,182 | 60,931 | 120,791 | 10,045 | 415,949 | 50.2 |
| Unconditional Grants | 30,309 | 3,337 | 7,389 | 563 | 41,598 | 5.0 |
| Conditional Grants | 71,682 | 5,857 | 18,348 | 1,757 | 97,644 | 11.8 |
| Payments in Lieu of Taxes | 0 | 1,437 | 14,356 | 108 | 15,901 | 1.9 |
| Fees & Service Charges | 51,221 | 16,765 | 45,678 | 1,767 | 115,431 | 13.9 |
| Program Revenues | 90,111 | 16,482 | 35,178 | 1,046 | 142,817 | 17.2 |
| TOTAL | 467,505 | 104,809 | 241,740 | 15,286 | 829,340 | 100.0 |
| <u>ASSESSMENT & TAX</u> | | | | | | |
| Levy – Local | 110,479 | | | 433.97 | | |
| – Regional | 224,182 | | | 324.98 | | |
| – School Board | 525,650 | | | 1,192.08 | | |
| Total Tax Levy | 860,311 | | | 1,951.03 | | |
| Long – Term Debt Outstanding | 65,032 | 36,584 | 5,098 | 1,087 | 107,801 | |
| Debt Charges | 25,832 | 9,458 | 3,306 | 355 | 38,951 | |
| Reserves/Reserve Funds | 275,651 | 63,373 | 297,548 | 3,491 | 640,063 | |

REGION OF PEEL

OPERATING EXPENDITURES

| | RMP | Brampton | Mississauga | Caledon | % of Total |
|--------------------------|---------|----------|-------------|---------|---------------|
| General Government | 21,627 | 16,420 | 61,053 | 3,457 | 102,557 |
| Protection | 97,698 | 20,708 | 37,956 | 1,799 | 158,161 |
| Transportation | 16,832 | 34,654 | 80,192 | 4,688 | 136,366 |
| Environmental | 50,437 | 755 | 3,741 | 94 | 55,027 |
| - Sewer | 48,678 | 0 | 0 | 0 | 48,678 |
| - Water | 43,860 | 3,877 | 8,809 | 973 | 57,519 |
| - Solid Waste | 103,928 | 607 | 731 | 7 | 105,273 |
| Health & Social Services | 0 | 28,263 | 44,155 | 3,658 | 76,076 |
| Recreation | 2,559 | 2,811 | 8,285 | 931 | 14,586 |
| Planning | 385,619 | 108,095 | 244,922 | 15,607 | 754,243 |
| TOTAL | | | | | 100.0 |

CAPITAL FUND REVENUES

| | | | | | |
|--------------------------|----------------|---------------|----------------|--------------|----------------|
| Revenue Fund | 26,155 | 1,090 | 0 | 1,440 | 28,685 |
| Reserves & Reserve Funds | 60,993 | 25,083 | 83,041 | 1,908 | 171,025 |
| Long Term Borrowing | 0 | 0 | 0 | 20 | 20 |
| Ontario Grants | 7,159 | 7,605 | 31,254 | 967 | 46,985 |
| Other Sources | 7,347 | 790 | 248 | 202 | 8,587 |
| TOTAL | 101,654 | 34,568 | 114,543 | 4,537 | 255,302 |
| | | | | | 100.0 |

CAPITAL FUND EXPENDITURES

| | | | | | |
|--------------------------|--------|--------|---------|-------|--------------|
| General Government | 2,174 | 17,004 | 5,784 | 160 | 25,122 |
| Protection | 11,558 | 1,193 | 3,650 | 528 | 16,929 |
| Transportation | 24,348 | 19,911 | 67,678 | 2,762 | 114,699 |
| Environmental | 14,099 | 265 | 720 | 0 | 15,084 |
| - Sewer | 24,094 | 0 | 0 | 0 | 24,094 |
| - Water | 6,037 | 0 | 0 | 0 | 6,037 |
| - Solid Waste | 3,293 | 9 | 0 | 0 | 3,302 |
| Health & Social Services | 0 | 8,405 | 41,032 | 1,555 | 50,992 |
| Recreation | 26 | 982 | 1 | 404 | 1,413 |
| Planning | 85,629 | 47,769 | 118,865 | 5,409 | 257,672 |
| TOTAL | | | | | 100.0 |

PER HOUSEHOLD DATA

| | | | | | |
|---------------------------|-------|-------|-------|-------|-------|
| Revenue Fund Expenditures | 1,721 | 1,540 | 1,716 | 1,399 | 3,366 |
| Capital Fund Expenditures | 382 | 681 | 833 | 485 | 1,150 |
| Municipal Taxes | 0 | 761 | 769 | 910 | |
| Special Charges | 222 | 0 | 7 | 61 | |
| School | 0 | 1,120 | 1,256 | 1,537 | |

REGION OF HALTON

| REGION OF HALTON POPULATION | RMH | Burlington | Halton Hills | Milton | Oakville | TOTAL | % of Total |
|-------------------------------------|------------|------------|--------------|-----------|-----------|------------|---------------|
| | 281,668 | 118,546 | 34,189 | 30,529 | 98,404 | 281,668 | |
| HOUSEHOLDS | 105,943 | 46,332 | 11,857 | 10,129 | 37,625 | 105,943 | |
| Population per Household | 2.66 | 2.56 | 2.88 | 3.01 | 2.62 | 2.66 | |
| <u>EQUALIZED TAXABLE ASSESSMENT</u> | 23,688,000 | 9,011,000 | 2,459,000 | 2,523,000 | 9,695,000 | 23,688,000 | |
| Residential Portion Percentage | 74.8 | 75.3 | 78.9 | 69.9 | 74.6 | 74.8 | |
| Commercial/Other Portion Percentage | 25.2 | 24.7 | 21.1 | 30.1 | 25.4 | 25.2 | |
| <u>REVENUE</u> | | | | | | | |
| Municipal Property Taxation | | | | | | | |
| Residential & Farm | 0 | 40,853 | 10,400 | 8,137 | 40,147 | 99,537 | 68.2 |
| Commercial, Industrial & Business | 0 | 16,980 | 3,518 | 4,602 | 17,055 | 42,155 | 28.9 |
| Other Special Charges | 0 | 1,937 | 381 | 397 | 1,513 | 4,228 | 2.9 |
| TOTAL | 0 | 59,770 | 14,299 | 13,136 | 58,715 | 145,920 | 100.0 |
| Property Taxation | 97,634 | 36,384 | 8,601 | 7,154 | 36,184 | 185,957 | 51.8 |
| Unconditional Grants | 13,896 | 2,566 | 1,056 | 535 | 2,059 | 20,112 | 5.6 |
| Conditional Grants | 29,531 | 4,563 | 1,104 | 1,247 | 4,760 | 41,205 | 11.5 |
| Payments in Lieu of Taxes | 0 | 2,694 | 335 | 558 | 1,987 | 5,574 | 1.6 |
| Fees & Service Charges | 19,153 | 9,829 | 1,553 | 1,248 | 8,821 | 40,604 | 11.3 |
| Program Revenues | 46,010 | 7,303 | 1,734 | 1,984 | 8,536 | 65,567 | 18.3 |
| TOTAL | 206,224 | 63,339 | 14,383 | 12,726 | 62,347 | 359,019 | 100.0 |

| ASSESSMENT & TAX | Average Residential Share of Tax Levy per Household | | | |
|------------------------------|---|----------------|----------|---------|
| Levy – Local | 48,286 | – Local | 502.13 | |
| – Regional | 97,634 | – Regional | 333.07 | |
| – School | 200,683 | – School | 1,148.65 | |
| Total Tax Levy | 346,603 | Total Tax Levy | 1,983.85 | |
| Long – Term Debt Outstanding | 52,596 | | 1,115 | 78,148 |
| Debt Charges | 14,873 | | 375 | 21,248 |
| Reserves/Reserve Funds | 68,677 | | 7,340 | 161,800 |

MOE 3Rs ALTERNATIVE ANALYSYS IN SUPPORT OF IWA
MUNICIPAL FINANCE ASSESSMENT – FUTURE URBAN RESEARCH

Page 2 of 2

REGION OF HALTON

RMH Burlington Halton Hills Milton Oakville

% of
Total

OPERATING EXPENDITURES

| | | | | | | | |
|--------------------------|----------------|---------------|---------------|---------------|---------------|----------------|--------------|
| General Government | 10,505 | 10,188 | 2,967 | 1,568 | 8,632 | 33,860 | 10.6 |
| Protection | 35,759 | 9,965 | 1,833 | 1,257 | 11,115 | 59,929 | 18.8 |
| Transportation | 4,437 | 20,126 | 4,142 | 4,979 | 20,610 | 54,294 | 17.1 |
| Environmental | 23,874 | 883 | 118 | 66 | 340 | 25,281 | 7.9 |
| – Sewer | | | | | | | |
| – Water | 22,258 | 0 | 0 | 0 | 0 | 22,258 | 7.0 |
| – Solid Waste | 22,489 | 1,721 | 400 | 385 | 2,552 | 27,547 | 8.7 |
| Health & Social Services | 43,897 | 252 | 199 | 11 | 421 | 44,780 | 14.1 |
| Recreation | 1,084 | 17,019 | 3,921 | 3,854 | 15,969 | 41,847 | 13.2 |
| Planning | 2,478 | 2,242 | 657 | 509 | 2,358 | 8,244 | 2.6 |
| TOTAL | 166,781 | 62,396 | 14,237 | 12,629 | 61,997 | 318,040 | 100.0 |

CAPITAL FUND REVENUES

| | | | | | | | |
|--------------------------|---------------|---------------|--------------|--------------|---------------|----------------|--------------|
| Revenue Fund | 11,803 | 1,491 | 1,159 | 1,062 | 4,456 | 19,971 | 14.8 |
| Reserves & Reserve Funds | 35,886 | 15,401 | 1,902 | 1,637 | 11,746 | 66,572 | 49.4 |
| Long Term Borrowing | 13,800 | 1,800 | 406 | 0 | 610 | 16,616 | 12.3 |
| Ontario Grants | 8,419 | 4,239 | 1,260 | 2,891 | 7,741 | 24,550 | 18.2 |
| Other Sources | 4,025 | 42 | 198 | 195 | 2,492 | 6,952 | 5.2 |
| TOTAL | 73,933 | 22,973 | 4,925 | 5,785 | 27,045 | 134,661 | 100.0 |

CAPITAL FUND EXPENDITURES

| | | | | | | | |
|--------------------------|---------------|---------------|--------------|--------------|---------------|----------------|--------------|
| General Government | 15,644 | 893 | 173 | 85 | 573 | 17,368 | 13.5 |
| Protection | 1,792 | 1,899 | 205 | 163 | 992 | 5,051 | 3.9 |
| Transportation | 5,004 | 14,876 | 3,385 | 3,399 | 18,211 | 44,875 | 35.0 |
| Environmental | 16,547 | 313 | 64 | 1 | 154 | 17,079 | 13.3 |
| – Sewer | | | | | | | |
| – Water | 7,443 | 0 | 0 | 0 | 0 | 7,443 | 5.8 |
| – Solid Waste | 16,174 | 0 | 0 | 0 | 242 | 16,416 | 12.8 |
| Health & Social Services | 1,092 | 52 | 2 | 40 | 0 | 1,186 | 0.9 |
| Recreation | 1,080 | 6,544 | 454 | 1,077 | 9,311 | 18,466 | 14.4 |
| Planning | 179 | 25 | 3 | 0 | 271 | 478 | 0.4 |
| TOTAL | 64,955 | 24,602 | 4,286 | 4,765 | 29,754 | 128,362 | 100.0 |

PER HOUSEHOLD DATA

| | | | | | | | |
|---------------------------|-------|-------|-------|-------|-------|-------|--|
| Revenue Fund Expenditures | 1,574 | 1,347 | 1,201 | 1,247 | 1,648 | 3,002 | |
| Capital Fund Expenditures | 613 | 531 | 361 | 467 | 792 | 1,212 | |
| Municipal Taxes | 0 | 798 | 743 | 678 | 971 | | |
| Special Charges | 252 | 5 | 3 | 2 | 9 | | |
| School | 0 | 1,092 | 1,045 | 1,114 | 1,339 | | |

SCHEDULE B:
COSTS OF DIVERSION
BY MUNICIPALITY

GTA 3R ANALYSIS

| (1992 Budget) | | | | | | | | | | Residential |
|-------------------|------------|--------------|------------|----------------------------|-------------------|------------------|-----------------------|-----|---------------|-------------|
| | Gross Cost | Rev & Grants | Net Cost | Residential Share of Taxes | Residential Costs | 1991 House-holds | Total Costs Per Tonne | | Household Net | |
| | | | | | | | Gross | Net | | |
| Haltoun Region | | | | | | | | | | |
| MRF | 306,600 | | 306,600 | | | | | | | |
| Contract | 1,718,400 | | 1,718,400 | | | | | | | |
| Vehicles | 294,600 | | 294,600 | | | | | | | |
| HHW | 708,300 | | 708,300 | | | | | | | |
| Debt Charges | 676,300 | | 676,300 | | | | | | | |
| Igloo | 56,700 | | 56,700 | | | | | | | |
| Admin | 702,400 | 2,200,000 | -1,497,600 | | | | | | | |
| Total Costs | 4,463,300 | 2,200,000 | 2,263,300 | 60% | 1,357,980 | 106,420 | 27,000 | 165 | 42 | |
| | | | | | | | | | 13 | |
| Durham Region | | | | | | | | | | |
| Overhead | 401,320 | | 401,320 | | | | | | | |
| Facilities Manage | 67,300 | | 67,300 | | | | | | | |
| MRF | 3,029,700 | | 3,029,700 | | | | | | | |
| Blue Box | 1,767,600 | | 1,767,600 | | | | | | | |
| Operations | 924,500 | | 924,500 | | | | | | | |
| Material Sales | 0 | 543,100 | -543,100 | | | | | | | |
| MOE | | 596,000 | -596,000 | | | | | | | |
| Total Costs | 6,190,420 | 1,139,100 | 5,051,320 | 59% | 2,980,279 | 136,135 | 38,805 | 160 | 45 | |
| | | | | | | | | | 22 | |
| York Region | | | | | | | | | | |
| Composting | 725,000 | | 725,000 | | | | | | | |
| MOE | 0 | 285,000 | -285,000 | | | | | | | |
| HHW | 1,060,000 | | 1,060,000 | | | | | | | |
| MOE | 0 | 90,000 | -90,000 | | | | | | | |
| Other rev | 0 | 4,000 | -4,000 | | | | | | | |
| Subtotal | 1,785,000 | 359,000 | 1,426,000 | | | | | | | |

GTA 3R ANALYSIS
TOTAL WASTE DIVERSION COSTS
(1992 Budget)

| (1992 Budget) | | | | | | | | | | Residential | |
|--------------------|------------|--------------|----------|----------------------------|-------------------|-----------------|-----------------------|-------|-------|-------------|--|
| | Gross Cost | Rev & Grants | Net Cost | Residential Share of Taxes | Residential Costs | 1991 Households | Total Costs Per Tonne | | Gross | Net | |
| | | | | | | | Tonnage | Tonne | | | |
| East Gwillimbury | | | | | | | | | | | |
| Contract - Metals | | | | | | | | | | | |
| Compost-Spring | | | | | | | | | | | |
| Compost-Fall | | | | | | | | | | | |
| Xmas trees | | | | | | | | | | | |
| Recycling | | | | | | | | | | | |
| Recycling Compound | | | | | | | | | | | |
| Blue Box admin | | | | | | | | | | | |
| HHW Admin | | | | | | | | | | | |
| Composting | | | | | | | | | | | |
| Revenue | | 500 | | | | | | | | | |
| MOE | | 60,000 | | | | | | | | | |
| Sales | | 7,500 | | | | | | | | | |
| MOE | | 10,000 | | | | | | | | | |
| BB Sales | | 624 | | | | | | | | | |
| Subtotal | 250,590 | 78,624 | 171,966 | | | | | | | | |
| Aurora | | | | | | | | | | | |
| budget 1992 | 268,607 | | 268,607 | | | | | | | | |
| Subtotal | 268,607 | 0 | 268,607 | | | | | | | | |
| Georgia | | | | | | | | | | | |
| Misc | | 91,300 | | | | | | | | | |
| BB | | | | | | | | | | | |
| Trans/ship | | | | | | | | | | | |
| Compostg | | 5,000 | | | | | | | | | |
| Subtotal | 241,450 | 96,300 | 145,150 | | | | | | | | |

GTA 3R ANALYSIS
TOTAL WASTE DIVERSION COSTS
(1992 Budget)

| | Gross Cost | Rev & Grants | Net Cost | Residential Share of Taxes | Residential Costs | 1991 Households | Total Costs Per Tonnage | | | Residential Cost Per Household |
|-------------------|------------|--------------|-----------|----------------------------|-------------------|-----------------|-------------------------|-----------|-----|--------------------------------|
| | | | | | | | Tonnage | Gross Net | | |
| | | | | | | | | Gross | Net | |
| Markham | | | | | | | | | | |
| Grant | | 650,000 | | | | | | | | |
| Revenue | | 526,100 | | | | | | | | |
| B Box | | | | | | | | | | |
| Yard | | | | | | | | | | |
| O'head | | | | | | | | | | |
| Advert | | | | | | | | | | |
| Coll'n | | | | | | | | | | |
| GST | | | | | | | | | | |
| Subtotal | 2,986,270 | 1,176,100 | 1,810,170 | | | | | | | |
| Newmarket | | | | | | | | | | |
| Contract | | | | | | | | | | |
| Depot | | | | | | | | | | |
| Compost | | | | | | | | | | |
| Institution | | | | | | | | | | |
| Tip Fee | | | | | | | | | | |
| Other | | | | | | | | | | |
| Subtotal | 686,448 | 0 | 686,448 | | | | | | | |
| Richmond Hill | | | | | | | | | | |
| Subtotal Estimate | 3,100,000 | 1,000,000 | 2,100,000 | | | | | | | |
| Vaughan | | | | | | | | | | |
| Budget 1991 | | | | | | | | | | |
| Curbside | | 281,600 | | | | | | | | |
| Compost | | | | | | | | | | |
| HHW | | | | | | | | | | |
| Subtotal | 1,090,004 | 281,600 | 808,404 | | | | | | | |

**GTA 3R ANALYSIS
TOTAL WASTE DIVERSION COSTS
(1992 Budget)**

| | Gross Cost | Rev & Grants | Residential Share of Taxes | | 1991 House- holds | Total Costs Per Tonnage | | Residential Cost Per Household |
|--------------------|---------------|-----------------|----------------------------------|-------|-------------------------|----------------------------|-----|--------------------------------------|
| | | | Net Cost | Costs | | Gross | Net | |
| Peel Region | | | | | | | | |
| Waste Redn & Re | 2,721,800 | | 2,721,800 | | | | | |
| Rev | | 230,000 | | | | | | |
| Grants | | 665,000 | | | | | | |
| | | | | | | | | |
| Subtotal | 2,721,800 | 895,000 | 1,826,800 | | | | | |
| Brampton | 0 | | 0 | | | | | |
| Outside Services | 0 | | 0 | | | | | |
| Admin | 264,094 | | 264,094 | | | | | |
| Ladlaw Waste | 2,025,920 | 160,000 | 1,865,920 | | | | | |
| Apartment | 309,211 | | 309,211 | | | | | |
| Plots | 6,700 | | 6,700 | | | | | |
| Composting | 550,760 | | 550,760 | | | | | |
| Xmas trees | 36,000 | | 36,000 | | | | | |
| Fine Papers | 3,000 | | 3,000 | | | | | |
| White Goods | 650 | | 650 | | | | | |
| Salvage | 52,000 | | 52,000 | | | | | |
| Promotion | 78,700 | | 78,700 | | | | | |
| Master Composter | 1,500 | | 1,500 | | | | | |
| Subtotal | 3,328,535 | 160,000 | 3,168,535 | | | | | |
| Caledon | 0 | | 0 | | | | | |
| Leaf Composting | 8,500 | | 8,500 | | | | | |
| Xmas Tree Pickup | 11,000 | | 11,000 | | | | | |
| Blue Coll'n/Recyle | 378,220 | | 378,220 | | | | | |
| IC Coll'n/Recyle | 163,500 | | 163,500 | | | | | |
| Subtotal | 561,220 | 0 | 561,220 | | | | | |

**GTA 3R ANALYSIS
TOTAL WASTE DIVERSION COSTS
(1992 Budget)**

| | Gross Cost | Rev & Grants | Net Cost | Residential Share of Taxes | Residential Costs | 1991 House- holds | Tonnage | Total Costs Per Tonne | Gross | Net | Residential Cost Per Household Net |
|-------------|---------------|-----------------|-------------|----------------------------------|----------------------|-------------------------|---------|--------------------------|-------|-----|---|
| Mississauga | 0 | | 0 | | | | | | | | |
| Admin | 215,155 | | 215,155 | | | | | | | | |
| Recycling | 4,988,200 | | 4,988,200 | | | | | | | | |
| Composting | 808,000 | | 808,000 | | | | | | | | |
| | 0 | | 0 | | | | | | | | |
| | 0 | | 0 | | | | | | | | |
| | 0 | 900,000 | -900,000 | | | | | | | | |
| | 0 | | 0 | | | | | | | | |
| Subtotal | 6,011,355 | 900,000 | 5,111,355 | | | | | | | | |
| Total Costs | 12,622,910 | 1,955,000 | 10,667,910 | 51% | 5,440,634 | 229,670 | 60,559 | 208 | 176 | 55 | 24 |

GTA 3R ANALYSIS
TOTAL WASTE DIVERSION COSTS
(1992 Budget)

| (1992 Budget) | | | | | | | | | | Residential |
|------------------|---------------|-----------------|-------------|----------------------------------|----------------------|-------------------------|--------------------------|--------------|-----------------------|-------------|
| | Gross Cost | Rev & Grants | Net Cost | Residential Share of Taxes | Residential Costs | 1991 House- holds | Total Costs Per Tonne | | Cost Per Household | |
| | | | | | | | Tonnage | Gross Net | | |
| Metro Toronto | | | | | | | | | | |
| Waste Rec & Redn | | | | | | | | | | |
| Rec Opn | | | | | | | | | | |
| Rev | | 1,950,000 | | | | | | | | |
| Grant | | 4,232,500 | | | | | | | | |
| Subtotal | 26,462,400 | 6,182,500 | 20,279,900 | | | | | | | |
| Etobicoke | | | | | | | | | | |
| Recycle | | | | | | | | | | |
| Apartment | | | | | | | | | | |
| Subtotal | 1,789,340 | 0 | 1,789,340 | | | | | | | |
| North York | | | | | | | | | | |
| Collection | | | | | | | | | | |
| Leaf Comp | | | | | | | | | | |
| Subtotal | 3,328,900 | 0 | 3,328,900 | | | | | | | |
| Scarborough | | | | | | | | | | |
| Subtotal | 8,233,100 | 81,800 | 8,151,300 | | | | | | | |
| Toronto | | | | | | | | | | |
| Subtotal | 8,620,000 | 188,000 | 8,432,000 | | | | | | | |

**GTA 3R ANALYSIS
TOTAL WASTE DIVERSION COSTS
(1992 Budget)**

[illegible]

Source: 1992 Current Operating Municipal Budgets

SCHEDULE C:
EFFECTS ANALYSIS
OF
ALTERNATIVE SYSTEMS

REGION OF DURHAM

| MOE 3Rs ANALYSIS MUNICIPAL FINANCE COMPONENT | | | RESIDENTIAL SYSTEMS | | | | C-1 | |
|---|---|--|---|--------------------------------------|---|--|-----|--|
| DATA NEEDED FOR EACH COMPONENT | | | DURHAM | | | | | |
| | Gross Capital Costs (buildings, vehicles equipment, etc.) | Value of Potential External Capital Funding Sources | Annual Operating Cost Estimates (Labour, Overhead, Maint., Repair, etc.) | Added Operating Overhead Costs | Potential Annual Operating Cost Savings | Net Annual Costs (incl Annualized Capital Cost) | | |
| Existing | | | 5,091,865 DIV RT 27% | 0 0% | -2,997,000 DIVER T 29,970 DISP/TONN 100 | 2,094,865 | | |
| Committed | 3,855,900 MRF EXP | 0 | 5,115,865 DIV RT 28% | 0 0% | -3,108,000 DIVER T 31,080 DISP/TONN 100 | 2,608,692 | | |
| Direct Cost A | 3,855,900 MRF EXP | 0 | 8,197,671 DIV RT 48% | 409,884 5% | -7,200,000 DIVER T 72,000 DISP/TONN 100 | 2,008,381 | | |
| Direct Cost B | 3,875,500 MRF EXP | 0 | 8,197,671 DIV RT 48% | 409,884 5% | -3,700,000 DIVER T 72,000 DISP/TONN 100 | 5,511,435 | | |
| Expanded Blue | 9,000,000 MRF EXP | 0 | 9,803,955 DIV RT 53% | 490,198 5% | -7,950,000 DIVER T 79,500 DISP/TONN 100 | 3,746,534 | | |
| Wet / Dry | 39,500,000 MRF EXP, COMP INT 11 | 0 | 11,134,145 DIV RT 64% | 556,707 5% | -9,600,000 DIVER T 96,000 DISP/TONN 100 | 8,245,746 | | |
| Mixed Waste a | 50,000,000 FACILITY | 0 | 12,374,715 DIV RT 69% | 618,736 5% | -10,350,000 DIVER T 103,500 DISP/TONN 100 | 10,434,455 | | |
| Mixed Waste b | 50,000,000 FACILITY | 0 | 12,374,715 DIV RT 92% | 618,736 5% | -13,800,000 DIVER T 138,000 DISP/TONN 100 | 6,984,455 | | |

EFFECTS ANALYSIS OF 3R COMMITMENTS

DIVERSION COSTS PER HOUSEHOLD

C-2

| | 3R Commitment | Annual Cost of Commitment | Residential Share of Annual Costs % | \$ | Total Business Tax (\$000s) | Percent Business Tax |
|---------------|------------------|---------------------------------|--|-----------|--------------------------------------|----------------------------|
| | | | | | 57,271 | |
| Existing | 0 | 2,094,865 | 59% | 1,235,970 | 859 | 1% |
| Committed | 3,855,900 | 2,608,692 | 59% | 1,539,128 | 1,070 | 2% |
| Direct Cost A | 3,855,900 | 2,008,381 | 59% | 1,184,945 | 823 | 1% |
| Direct Cost B | 3,875,500 | 5,511,435 | 59% | 3,251,747 | 823 | 1% |
| Expanded | 9,000,000 | 3,746,534 | 59% | 2,210,455 | 1,536 | 3% |
| Wet/dry | 39,500,000 | 8,245,746 | 59% | 4,864,990 | 3,381 | 6% |
| Mixed a | 50,000,000 | 10,434,455 | 59% | 6,156,329 | 4,278 | 7% |
| Mixed b | 50,000,000 | 6,984,455 | 59% | 4,120,829 | 2,864 | 5% |

| | Existing Residential Costs | Cost of Commitment | Total Future Residential Costs | Total Future Households | Costs Per Household Future | Existing | Percent Change |
|------------|----------------------------------|-----------------------|--------------------------------------|-------------------------------|----------------------------------|----------|-------------------|
| Existing | 0 | 1,235,970 | 1,235,970 | 202,040 | 0 | 9 | -- |
| Committed | 1,235,970 | 303,158 | 2,137,480 | 202,040 | 11 | 9 | 17% |
| Dir Cost A | 1,235,970 | -51,025 | 1,783,297 | 202,040 | 9 | 9 | -3% |
| Dir Cost B | 1,235,970 | 2,015,776 | 3,850,099 | 202,040 | 19 | 9 | 110% |
| Expanded | 1,235,970 | 974,484 | 2,808,807 | 202,040 | 14 | 9 | 53% |
| Wet/dry | 1,235,970 | 3,629,020 | 5,463,342 | 202,040 | 27 | 9 | 198% |
| Mixed a | 1,235,970 | 4,920,358 | 6,754,680 | 202,040 | 33 | 9 | 268% |
| Mixed b | 1,235,970 | 2,884,858 | 4,719,180 | 202,040 | 23 | 9 | 157% |

Note: Household growth is used to show the effect of property assessment growth, but commercial/industrial assessment growth will not change the taxation split in the future. Moreover, new household growth will decrease the existing household cost for diversion, while future household growth beyond the period shown here, but still serviced by the committed capital is not included in the analysis.

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

MUNICIPAL TAXATION PER HOUSEHOLD

C-3

| | Total Municipal Taxation (\$000) | Existing Cost of Diversion (\$000) | Annual Cost of Commitment (\$000) | Existing Diversion Cost as a Percent of Total Taxation | Future Diversion Cost as a Percent of Total Taxation |
|------------|---|---|--|---|---|
| Existing | 189,065 | 0 | 2,095 | 0% | 1% |
| Committed | 189,065 | 1,236 | 2,609 | 1% | 2% |
| Dir Cost A | 189,065 | 1,236 | 2,008 | 1% | 2% |
| Dir Cost B | 189,065 | 1,236 | 5,511 | 1% | 4% |
| Expanded | 189,065 | 1,236 | 3,747 | 1% | 3% |
| Wet/dry | 189,065 | 1,236 | 8,246 | 1% | 5% |
| Mixed a | 189,065 | 1,236 | 10,434 | 1% | 6% |
| Mixed b | 189,065 | 1,236 | 6,984 | 1% | 4% |

| | Total Municipal Taxation Per Hshold | Cost of Diversion Commitment Per Hshold | Percent Increase in Household Taxation |
|------------|--|--|---|
| Existing | 1,032 | 9 | 1% |
| Committed | 1,032 | 11 | 1% |
| Dir Cost A | 1,032 | 9 | 1% |
| Dir Cost B | 1,032 | 19 | 2% |
| Expanded | 1,032 | 14 | 1% |
| Wet/dry | 1,032 | 27 | 3% |
| Mixed a | 1,032 | 33 | 3% |
| Mixed b | 1,032 | 23 | 2% |

Note: If household growth, i.e. residential property assessment, is also taken into account, changes to household taxation resulting from diversion costs in Durham and York, and Halton would be negative.

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

MUNICIPAL DEBT

C-4

| | Total Existing Debt (\$000) | Total Diversion Debt (\$000) | Percent Increase |
|------------|--------------------------------------|---------------------------------------|---------------------|
| Existing | 35,293 | 0 | 0% |
| Committed | 35,293 | 3,856 | 11% |
| Dir Cost A | 35,293 | 3,856 | 11% |
| Dir Cost B | 35,293 | 3,876 | 11% |
| Expanded | 35,293 | 9,000 | 26% |
| Wet/dry | 35,293 | 39,500 | 112% |
| Mixed a | 35,293 | 50,000 | 142% |
| Mixed b | 35,293 | 50,000 | 142% |

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

DEBT PAYMENTS

C-5

| | Existing Debt Charges (\$000) | Existing Expenditures (\$000) | Percent Existing Debt Charges / Expenditures | |
|-------------------|--|---|---|----------|
| Existing | 10,884 | 475,716 | 2.3% | |
| Committed | 10,884 | 475,716 | 2.3% | |
| Dir Cost A | 10,884 | 475,716 | 2.3% | |
| Dir Cost B | 10,884 | 475,716 | 2.3% | |
| Expanded | 10,884 | 475,716 | 2.3% | |
| Wet/dry | 10,884 | 475,716 | 2.3% | |
| Mixed a | 10,884 | 475,716 | 2.3% | |
| Mixed b | 10,884 | 475,716 | 2.3% | |
| | Future Commitment D-Charges | Future Debt Charges Committed Plus Existing | Percent Future Debt Charges to Expenditures | Increase |
| Existing | 0 | 10,884 | 2.3% | 0.0% |
| Committed | 601 | 11,485 | 2.4% | 0.1% |
| Dir Cost A | 601 | 11,485 | 2.4% | 0.1% |
| Dir Cost B | 604 | 11,488 | 2.4% | 0.1% |
| Expanded | 1,402 | 12,286 | 2.6% | 0.3% |
| Wet/dry | 6,155 | 17,039 | 3.6% | 1.3% |
| Mixed a | 7,791 | 18,675 | 3.9% | 1.6% |
| Mixed b | 7,791 | 18,675 | 3.9% | 1.6% |

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

DEBT CAPACITY

C-6

| | Existing Total Available Debt Capacity | Existing Debt | Current Remaining Debt Capacity | Percent Remaining | Committed Diversion | Percent Capacity Remaining After Committed |
|------------|--|------------------|--|----------------------|------------------------|--|
| Existing | 370,074 | 35,293 | 334,781 | 90% | 0 | 90% |
| Committed | 370,074 | 35,293 | 334,781 | 90% | 3,856 | 89% |
| Dir Cost A | 370,074 | 35,293 | 334,781 | 90% | 3,856 | 89% |
| Dir Cost B | 370,074 | 35,293 | 334,781 | 90% | 3,876 | 89% |
| Expanded | 370,074 | 35,293 | 334,781 | 90% | 9,000 | 88% |
| Wet/dry | 370,074 | 35,293 | 334,781 | 90% | 39,500 | 80% |
| Mixed a | 370,074 | 35,293 | 334,781 | 90% | 50,000 | 77% |
| Mixed b | 370,074 | 35,293 | 334,781 | 90% | 50,000 | 77% |

Source: Future Urban Research

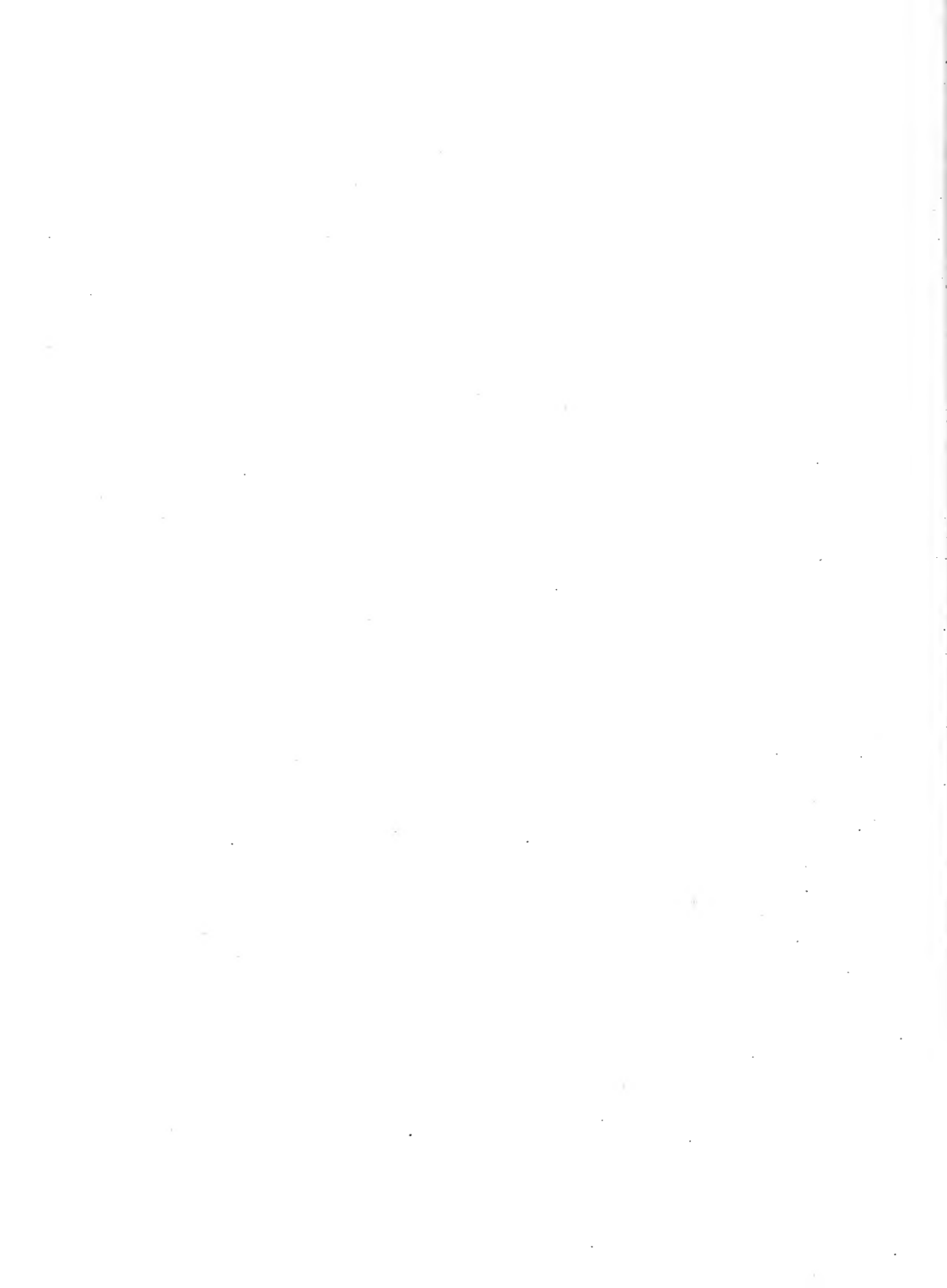
EFFECTS ANALYSIS OF 3R COMMITMENTS

FUTURE GTA HOUSEHOLDS

C-7

| | 1991 Households | New Households | Total Future Households | Percent Increase |
|------------|--------------------|-------------------|-------------------------------|---------------------|
| Existing | 136,135 | 65,905 | 202,040 | 48% |
| Committed | 136,135 | 65,905 | 202,040 | 48% |
| Dir Cost A | 136,135 | 65,905 | 202,040 | 48% |
| Dir Cost B | 136,135 | 65,905 | 202,040 | 48% |
| Expanded | 136,135 | 65,905 | 202,040 | 48% |
| Wet/dry | 136,135 | 65,905 | 202,040 | 48% |
| Mixed a | 136,135 | 65,905 | 202,040 | 48% |
| Mixed b | 136,135 | 65,905 | 202,040 | 48% |

Source: Hardy Stevenson and Associates



METROPOLITAN TORONTO

| MOE 3Rs ANALYSIS MUNICIPAL FINANCE COMPONENT | | | | RESIDENTIAL SYSTEMS | | | | C-8 | |
|---|---|----------------------------|----|---|--------------------------------------|---|---|-----|--|
| | | | | Metro | | | | | |
| | Gross Capital Costs (buildings, vehicles equipment, etc) | Capital Funding Sources | | Annual Operating Cost Estimates (Labour, Overhead, Maint , Repair, etc) | Added Operating Overhead Costs | Potential Annual Operating Cost Savings | Net Annual Levy (incl Annualized Capital Cost) | | |
| Existing | | | | 30,268,613 DIV RT | 13,966,129 46% | -20,487,605 DIVERT DISP/TONNE | 23,747,137 204,876 100 | | |
| Committed | 135,681,000 | 0 | | 32,787,832 DIV RT | 13,115,133 40% | -24,682,173 DIVERT DISP/TONNE | 42,362,618 246,822 100 | | |
| Direct Cost A | 135,681,000 | 0 | | 66,150,865 DIV RT | 19,845,260 30% | -49,364,345 DIVERT DISP/TONNE | 57,773,605 493,643 100 | | |
| Direct Cost B | 135,681,000 | 0 | | 66,150,865 DIV RT | 19,845,260 30% | -4,364,345 DIVERT DISP/TONNE | 102,773,605 493,643 100 | | |
| Expanded Blue | 135,681,000 | 0 | | 78,826,847 DIV RT | 15,765,369 20% | -56,416,394 DIVERT DISP/TONNE | 59,317,648 564,164 100 | | |
| Wet / Dry | 166,781,000 | 0 | | 78,430,357 DIV RT | 11,764,554 15% | -72,871,176 DIVERT DISP/TONNE | 43,311,565 728,712 100 | | |
| Mixed Waste a | 265,984,000 FAC COMP | 25,000,000 Reserve | 31 | 152,820,009 DIV RT | 22,923,001 15% | -75,221,859 DIVERT DISP/TONNE | 138,071,300 752,219 100 | | |
| Mixed Waste b | 315,984,000 | 50,000,000 Reserve | | 152,820,009 DIV RT | 22,923,001 15% | -101,079,373 DIVERT DISP/TONNE | 116,109,288 1,010,794 100 | | |

EFFECTS ANALYSIS OF 3R COMMITMENTS

Metro

C-9

DIVERSION COSTS PER HOUSEHOLD

GROWTH 9%

| | 3R Capital | Annual Cost of Diversion | Residential Share of Annual Costs % | \$ | Total Business Tax (\$000s) | Percent Business Tax |
|---------------|---------------|--------------------------------|--|------------|--------------------------------------|----------------------------|
| | | | | | 896,869 | |
| Existing | 0 | 23,747,137 | 48% | 11,398,626 | 12,349 | 1% |
| Committed | 135,681,000 | 42,362,618 | 48% | 20,334,057 | 22,029 | 2% |
| Direct Cost A | 135,681,000 | 57,773,605 | 48% | 27,731,330 | 30,042 | 3% |
| Direct Cost B | 135,681,000 | 102,773,605 | 48% | 49,331,330 | 43,442 | 4% |
| Expanded | 135,681,000 | 59,317,648 | 48% | 28,472,471 | 30,845 | 3% |
| Wet/dry | 166,781,000 | 43,311,565 | 48% | 20,789,551 | 22,522 | 2% |
| Mixed a | 240,984,000 | 138,071,300 | 48% | 66,274,224 | 71,797 | 7% |
| Mixed b | 265,984,000 | 116,109,288 | 48% | 55,732,458 | 60,377 | 6% |

| | Existing Residential Costs | Cost of Commitment | Total Future Residential Costs | Total Future Households | Costs Per Household Future | Existing | Percent Change |
|------------|----------------------------------|-----------------------|--------------------------------------|-------------------------------|----------------------------------|----------|-------------------|
| Existing | 0 | 11,398,626 | 11,398,626 | 940,663 | 0 | 13 | 0% |
| Committed | 11,398,626 | 8,935,431 | 21,337,494 | 940,663 | 23 | 13 | 72% |
| Dir Cost A | 11,398,626 | 16,332,705 | 28,734,768 | 940,663 | 31 | 13 | 132% |
| Dir Cost B | 11,398,626 | 37,932,705 | 50,334,768 | 940,663 | 54 | 13 | 306% |
| Expanded | 11,398,626 | 17,073,845 | 29,475,908 | 940,663 | 31 | 13 | 138% |
| Wet/dry | 11,398,626 | 9,390,925 | 21,792,988 | 940,663 | 23 | 13 | 76% |
| Mixed a | 11,398,626 | 54,875,598 | 67,277,661 | 940,663 | 72 | 13 | 442% |
| Mixed b | 11,398,626 | 44,333,832 | 56,735,895 | 940,663 | 60 | 13 | 357% |

Note: Household growth is used to show the effect of property assessment growth, but commercial/industrial assessment growth will not change the taxation split in the future. Moreover, new household growth will decrease the existing household cost for diversion, while future household growth beyond the period shown here, but still serviced by the committed capital is not included in the analysis.

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

Metro

MUNICIPAL TAXATION PER HOUSEHOLD

C-10

| | Total Municipal Taxation (\$000) | Existing Cost of Diversion (\$000) | Annual Cost of Commitment (\$000) | Existing Diversion Cost as a Percent of Total Taxation | Future Diversion Cost as a Percent of Total Taxation |
|------------|---|---|--|---|---|
| Existing | 1,726,895 | 0 | 23,747 | 0% | 1% |
| Committed | 1,726,895 | 11,399 | 42,363 | 1% | 3% |
| Dir Cost A | 1,726,895 | 11,399 | 57,774 | 1% | 4% |
| Dir Cost B | 1,726,895 | 11,399 | 102,774 | 1% | 7% |
| Expanded | 1,726,895 | 11,399 | 59,318 | 1% | 4% |
| Wet/dry | 1,726,895 | 11,399 | 43,312 | 1% | 3% |
| Mixed a | 1,726,895 | 11,399 | 138,071 | 1% | 9% |
| Mixed b | 1,726,895 | 11,399 | 116,109 | 1% | 7% |

| | Total Municipal Taxation Per Hshold | Cost of Diversion Commitment Per Hshold | Percent Increase in Household Taxation |
|------------|--|--|---|
| Existing | 1,016 | 13 | 1% |
| Committed | 1,016 | 23 | 2% |
| Dir Cost A | 1,016 | 31 | 3% |
| Dir Cost B | 1,016 | 54 | 5% |
| Expanded | 1,016 | 31 | 3% |
| Wet/dry | 1,016 | 23 | 2% |
| Mixed a | 1,016 | 72 | 7% |
| Mixed b | 1,016 | 60 | 6% |

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

Metro

MUNICIPAL DEBT

C-11

| | Total Exiting Debt (\$000) | Total Diversion Debt (\$000) | Percent Increase |
|------------|-------------------------------------|---------------------------------------|---------------------|
| Existing | 697,018 | 0 | 0% |
| Committed | 697,018 | 135,681 | 19% |
| Dir Cost A | 697,018 | 135,681 | 19% |
| Dir Cost B | 697,018 | 135,681 | 19% |
| Expanded | 697,018 | 135,681 | 19% |
| Wet/dry | 697,018 | 166,781 | 24% |
| Mixed a | 697,018 | 240,984 | 35% |
| Mixed b | 697,018 | 265,984 | 38% |

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

Metro

DEBT PAYMENTS

C-12

| | Existing Debt Charges (\$000) | Existing Expenditures (\$000) | Percent Existing Debt Charges / Expenditures | |
|-------------------|--|---|---|----------|
| Existing | 193,135 | 4,524,007 | 4.3% | |
| Committed | 193,135 | 4,524,007 | 4.3% | |
| Dir Cost A | 193,135 | 4,524,007 | 4.3% | |
| Dir Cost B | 193,135 | 4,524,007 | 4.3% | |
| Expanded | 193,135 | 4,524,007 | 4.3% | |
| Wet/dry | 193,135 | 4,524,007 | 4.3% | |
| Mixed a | 193,135 | 4,524,007 | 4.3% | |
| Mixed b | 193,135 | 4,524,007 | 4.3% | |
| | Future Commitment D-Charges | Future Debt Charges Committed Plus Existing | Percent Future Debt Charges to Expenditures | Increase |
| Existing | 0 | 193,135 | 4.3% | 0.0% |
| Committed | 21,142 | 214,277 | 4.7% | 0.5% |
| Dir Cost A | 21,142 | 214,277 | 4.7% | 0.5% |
| Dir Cost B | 21,142 | 214,277 | 4.7% | 0.5% |
| Expanded | 21,142 | 214,277 | 4.7% | 0.5% |
| Wet/dry | 25,988 | 219,123 | 4.8% | 0.6% |
| Mixed a | 37,550 | 230,685 | 5.1% | 0.8% |
| Mixed b | 41,446 | 234,581 | 5.2% | 0.9% |

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

Metro

DEBT CAPACITY

C-13

| | Existing Total Available Debt Capacity | Existing Debt | Current Remaining Debt Capacity | Percent Remaining | Committed Diversion | Percent Capacity Remaining After Committed |
|------------|--|------------------|--|----------------------|------------------------|--|
| Existing | 3,519,362 | 697,018 | 2,822,344 | 80% | 0 | 80% |
| Committed | 3,519,362 | 697,018 | 2,822,344 | 80% | 135,681 | 76% |
| Dir Cost A | 3,519,362 | 697,018 | 2,822,344 | 80% | 135,681 | 76% |
| Dir Cost B | 3,519,362 | 697,018 | 2,822,344 | 80% | 135,681 | 76% |
| Expanded | 3,519,362 | 697,018 | 2,822,344 | 80% | 135,681 | 76% |
| Wet/dry | 3,519,362 | 697,018 | 2,822,344 | 80% | 166,781 | 75% |
| Mixed a | 3,519,362 | 697,018 | 2,822,344 | 80% | 240,984 | 73% |
| Mixed b | 3,519,362 | 697,018 | 2,822,344 | 80% | 265,984 | 73% |

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

Metro

FUTURE GTA HOUSEHOLDS

C-14

| | 1991 Households | New Households | Total Future Households | Percent Increase |
|------------|--------------------|-------------------|-------------------------------|---------------------|
| Existing | 864,555 | 76,108 | 940,663 | 9% |
| Committed | 864,555 | 76,108 | 940,663 | 9% |
| Dir Cost A | 864,555 | 76,108 | 940,663 | 9% |
| Dir Cost B | 864,555 | 76,108 | 940,663 | 9% |
| Expanded | 864,555 | 76,108 | 940,663 | 9% |
| Wet/dry | 864,555 | 76,108 | 940,663 | 9% |
| Mixed a | 864,555 | 76,108 | 940,663 | 9% |
| Mixed b | 864,555 | 76,108 | 940,663 | 9% |

Source: Hardy Stevenson and Associates

REGION OF YORK

| MOE 3Rs ANALYSIS MUNICIPAL FINANCE COMPONENT | | | RESIDENTIAL SYSTEMS | | | | | C-15 | |
|---|---|----------------------------|---|--------------------------------------|---|---|--|------|--|
| | | | York | | | | | | |
| | Gross Capital Costs (buildings, vehicles equipment, etc) | Capital Funding Sources | Annual Operating Cost Estimates (Labour, Maint , Repair, etc) | Added Operating Overhead Costs | Potential Annual Operating Cost Savings | Net Annual Levy (Incl Annualized Capital Cost) | | | |
| Existing | | | 6,449,606 DIV RT 28% | 1,321,095 20% | -5,544,000 DIVERT DISP/TONNE 100 | 2,226,701 | | | |
| Committed | 2,785,100 | 0 | 6,449,606 DIV RT 28% | 1,321,095 20% | -5,544,000 DIVERT DISP/TONNE 100 | 2,660,676 | | | |
| Direct Cost A | 2,785,100 | 0 | 10,067,256 DIV RT 50% | 2,013,451 20% | -9,900,000 DIVERT DISP/TONNE 100 | 2,614,682 | | | |
| Direct Cost B | 2,785,100 | 0 | 10,067,256 DIV RT 50% | 2,013,451 20% | -3,400,000 DIVERT DISP/TONNE 100 | 9,114,682 | | | |
| Expanded Blue | 10,000,000 | 0 | 11,617,896 DIV RT 56% | 2,323,579 20% | -11,088,000 DIVERT DISP/TONNE 100 | 4,411,676 | | | |
| Wet / Dry | 45,000,000 INT CAPTL 10 | 0 | 19,014,943 DIV RT 65% | 2,852,241 15% | -12,870,000 DIVERT DISP/TONNE 100 | 16,009,088 | | | |
| Mixed Waste a | 57,785,100 FAC COMP | 0 | 24,915,115 DIV RT 71% | 3,737,267 15% | -14,058,000 DIVERT DISP/TONNE 100 | 23,598,462 | | | |
| Mixed Waste b | 57,785,100 | 0 | 24,915,115 DIV RT 89% | 3,737,267 15% | -17,622,000 DIVERT DISP/TONNE 100 | 20,034,462 | | | |

EFFECTS ANALYSIS OF 3R COMMITMENTS

York

C-16

DIVERSION COSTS PER HOUSEHOLD

GROWTH 9%

| | 3R Capital | Annual Cost of Diversion | Residential Share of Annual Costs % | \$ | Total Business Tax (\$000s) | Percent Business Tax |
|------------|---------------|--------------------------------|--|------------|--------------------------------------|----------------------------|
| | | | | | 61,333 | |
| Existing | 0 | 2,226,701 | 70% | 1,558,691 | 668 | 1% |
| Committed | 2,785,100 | 2,660,676 | 70% | 1,862,473 | 798 | 1% |
| Dir Cost A | 2,785,100 | 2,614,682 | 70% | 1,830,277 | 784 | 1% |
| Dir Cost B | 2,785,100 | 9,114,682 | 70% | 6,380,277 | 784 | 1% |
| Expanded | 10,000,000 | 4,411,676 | 70% | 3,088,173 | 1,324 | 2% |
| Wet/dry | 45,000,000 | 16,009,088 | 70% | 11,206,362 | 4,803 | 7% |
| Mixed a | 57,785,100 | 23,598,462 | 70% | 16,518,923 | 7,080 | 11% |
| Mixed b | 57,785,100 | 20,034,462 | 70% | 14,024,123 | 6,010 | 9% |

| | Existing Residential Costs | Cost of Commitment | Total Future Residential Costs | Total Future Households | Costs Per Household Future | Existing | Percent Change |
|------------|----------------------------------|-----------------------|--------------------------------------|-------------------------------|----------------------------------|----------|-------------------|
| Existing | 0 | 1,558,691 | 1,558,691 | 225,620 | 0 | 10 | 0% |
| Committed | 1,558,691 | 303,782 | 2,640,705 | 225,620 | 12 | 10 | 13% |
| Dir Cost A | 1,558,691 | 271,586 | 2,608,509 | 225,620 | 12 | 10 | 12% |
| Dir Cost B | 1,558,691 | 4,821,586 | 7,158,509 | 225,620 | 32 | 10 | 206% |
| Expanded | 1,558,691 | 1,529,482 | 3,866,405 | 225,620 | 17 | 10 | 65% |
| Wet/dry | 1,558,691 | 9,647,671 | 11,984,594 | 225,620 | 53 | 10 | 413% |
| Mixed a | 1,558,691 | 14,960,232 | 17,297,155 | 225,620 | 77 | 10 | 640% |
| Mixed b | 1,558,691 | 12,465,432 | 14,802,355 | 225,620 | 66 | 10 | 533% |

Note: Household growth is used to show the effect of property assessment growth, but commercial/industrial assessment growth will not change the taxation split in the future. Moreover, new household growth will decrease the existing household cost for diversion, while future household growth beyond the period shown here, but still serviced by the committed capital is not included in the analysis.

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

York

MUNICIPAL TAXATION PER HOUSEHOLD

C-17

| | Total Municipal Taxation (\$000) | Existing Cost of Diversion (\$000) | Annual Cost of Commitment (\$000) | Existing Diversion Cost as a Percent of Total Taxation | Future Diversion Cost as a Percent of Total Taxation |
|-------------------|---|---|--|---|---|
| Existing | 207,220 | 0 | 2,227 | 0% | 1% |
| Committed | 207,220 | 1,559 | 2,661 | 1% | 2% |
| Dir Cost A | 207,220 | 1,559 | 2,615 | 1% | 2% |
| Dir Cost B | 207,220 | 1,559 | 9,115 | 1% | 5% |
| Expanded | 207,220 | 1,559 | 4,412 | 1% | 3% |
| Wet/dry | 207,220 | 1,559 | 16,009 | 1% | 8% |
| Mixed a | 207,220 | 1,559 | 23,598 | 1% | 12% |
| Mixed b | 207,220 | 1,559 | 20,034 | 1% | 10% |

| | Total Municipal Taxation Per Hshold | Cost of Diversion Commitment Per Hshold | Percent Increase in Household Taxation |
|-------------------|--|--|---|
| Existing | 1,040 | 10 | 1% |
| Committed | 1,040 | 12 | 1% |
| Dir Cost A | 1,040 | 12 | 1% |
| Dir Cost B | 1,040 | 32 | 3% |
| Expanded | 1,040 | 17 | 2% |
| Wet/dry | 1,040 | 53 | 5% |
| Mixed a | 1,040 | 77 | 7% |
| Mixed b | 1,040 | 66 | 6% |

Note: If household growth, i.e. residential property assessment, is also taken into account, changes to household taxation resulting from diversion costs in Durham and York, and Halton would be negative.

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

York

MUNICIPAL DEBT

C-18

| | Total Existing Debt (\$000) | Total Diversion Debt (\$000) | Percent Increase |
|------------|--------------------------------------|---------------------------------------|---------------------|
| Existing | 39,212 | 0 | 0% |
| Committed | 39,212 | 2,785 | 7% |
| Dir Cost A | 39,212 | 2,785 | 7% |
| Dir Cost B | 39,212 | 2,785 | 7% |
| Expanded | 39,212 | 10,000 | 26% |
| Wet/dry | 39,212 | 45,000 | 115% |
| Mixed a | 39,212 | 57,785 | 147% |
| Mixed b | 39,212 | 57,785 | 147% |

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

York

DEBT PAYMENTS

C-19

| | Existing Debt Charges (\$000) | Existing Expenditures (\$000) | Percent Existing Debt Charges / Expenditures | |
|------------|--|---|---|----------|
| Existing | 9,183 | 438,044 | 2.1% | |
| Committed | 9,183 | 438,044 | 2.1% | |
| Dir Cost A | 9,183 | 438,044 | 2.1% | |
| Dir Cost B | 9,183 | 438,044 | 2.1% | |
| Expanded | 9,183 | 438,044 | 2.1% | |
| Wet/dry | 9,183 | 438,044 | 2.1% | |
| Mixed a | 9,183 | 438,044 | 2.1% | |
| Mixed b | 9,183 | 438,044 | 2.1% | |
| | Future Commitment D-Charges | Future Debt Charges Committed Plus Existing | Percent Future Debt Charges to Expenditures | Increase |
| Existing | 0 | 9,183 | 2.1% | 0.0% |
| Committed | 434 | 9,617 | 2.2% | 0.1% |
| Dir Cost A | 434 | 9,617 | 2.2% | 0.1% |
| Dir Cost B | 434 | 9,617 | 2.2% | 0.1% |
| Expanded | 1,558 | 10,741 | 2.5% | 0.4% |
| Wet/dry | 7,012 | 16,195 | 3.7% | 1.6% |
| Mixed a | 9,004 | 18,187 | 4.2% | 2.1% |
| Mixed b | 9,004 | 18,187 | 4.2% | 2.1% |

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

York

DEBT CAPACITY

C-20

| | Existing Total Available Debt Capacity | Existing Debt | Current Remaining Debt Capacity | Percent Remaining | Committed Diversion | Percent Capacity Remaining After Committed |
|------------|--|------------------|--|----------------------|------------------------|--|
| Existing | 340,768 | 39,212 | 301,556 | 88% | 0 | 88% |
| Committed | 340,768 | 39,212 | 301,556 | 88% | 2,785 | 88% |
| Dir Cost A | 340,768 | 39,212 | 301,556 | 88% | 2,785 | 88% |
| Dir Cost B | 340,768 | 39,212 | 301,556 | 88% | 2,785 | 88% |
| Expanded | 340,768 | 39,212 | 301,556 | 88% | 10,000 | 86% |
| Wet/dry | 340,768 | 39,212 | 301,556 | 88% | 45,000 | 75% |
| Mixed a | 340,768 | 39,212 | 301,556 | 88% | 57,785 | 72% |
| Mixed b | 340,768 | 39,212 | 301,556 | 88% | 57,785 | 72% |

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

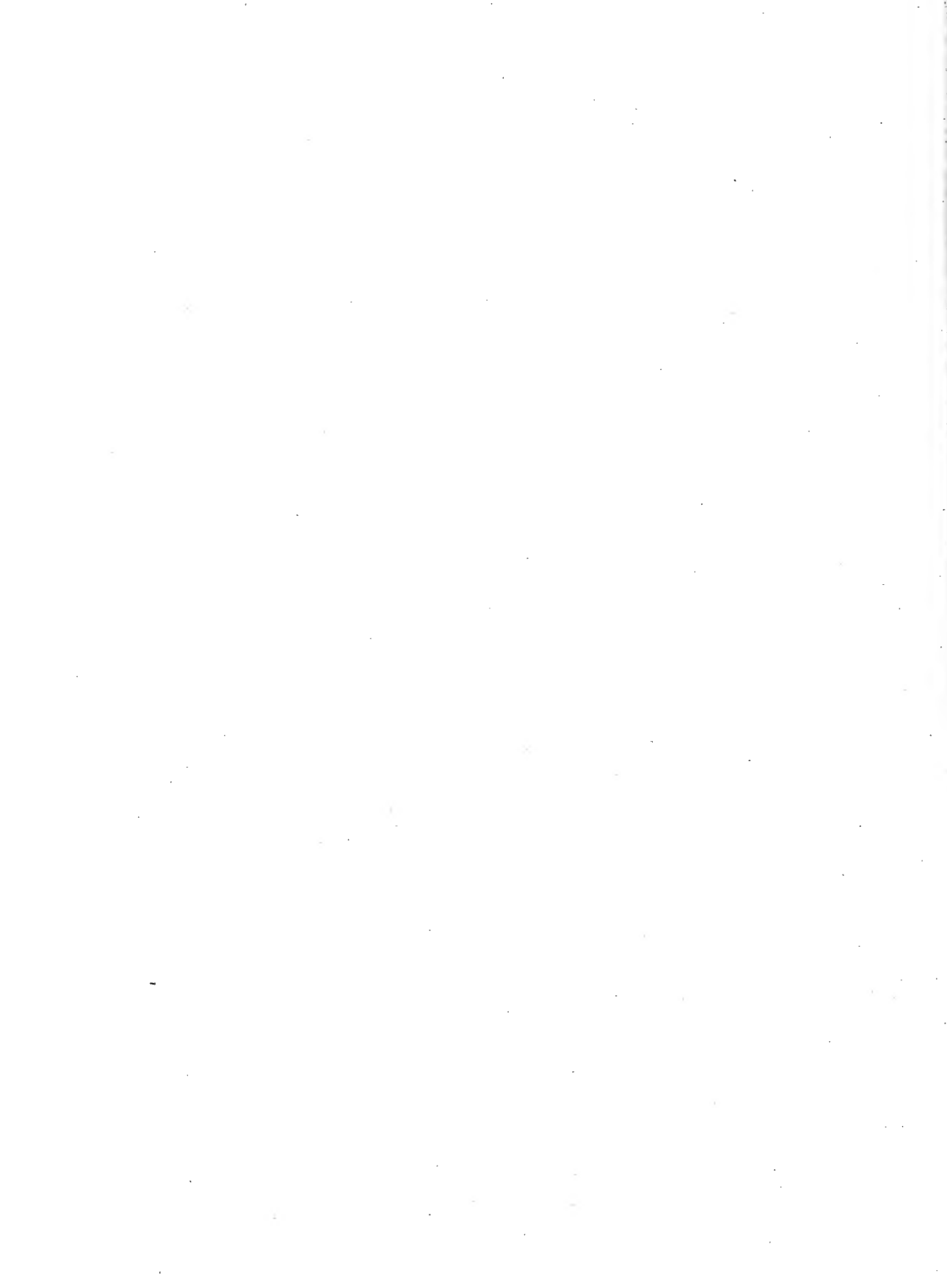
York

FUTURE GTA HOUSEHOLDS

C-21

| | 1991 Households | New Households | Total Future Households | Percent Increase |
|------------|--------------------|-------------------|-------------------------------|---------------------|
| Existing | 150,485 | 75,135 | 225,620 | 50% |
| Committed | 150,485 | 75,135 | 225,620 | 50% |
| Dir Cost A | 150,485 | 75,135 | 225,620 | 50% |
| Dir Cost B | 150,485 | 75,135 | 225,620 | 50% |
| Expanded | 150,485 | 75,135 | 225,620 | 50% |
| Wet/dry | 150,485 | 75,135 | 225,620 | 50% |
| Mixed a | 150,485 | 75,135 | 225,620 | 50% |
| Mixed b | 150,485 | 75,135 | 225,620 | 50% |

Source: Hardy Stevenson and Associates



REGION OF PEEL

| MOE 3Rs ANALYSIS MUNICIPAL FINANCE COMPONENT | | | | RESIDENTIAL SYSTEMS | | | C-22 | |
|---|---|----------------------------|---|--------------------------------------|---|---|------|--|
| | | | | PEEL | | | | |
| | Gross Capital Costs (buildings, vehicles equipment, etc.) | Capital Funding Sources | Annual Operating Cost Estimates (Labour, Overhead, Maint., Repair, etc.) | Added Operating Overhead Costs | Potential Annual Operating Cost Savings | Net Annual Levy (incl Annualized Capital Cost) | | |
| Existing | | | 6,648,006 DIV RT | 2,000,000 30% | -5,080,000 DIVERT DISP/TONN | 3,568,006 50,800 100 | | |
| Committed | 90,300,000 DEPOTS MRF COMP | 0 | 7,902,506 DIV RT | 2,370,752 30% | -7,620,000 DIVERT DISP/TONN | 16,723,812 76,200 100 | | |
| Direct Cost A | 90,300,000 DEPOTS MRF, COMP | 0 | 15,449,552 DIV RT | 3,089,910 20% | -14,020,800 DIVERT DISP/TONN | 18,589,217 140,208 100 | | |
| Direct Cost A | 90,300,000 DEPOTS MRF, COMP | 0 | 15,449,552 DIV RT | 3,089,910 20% | -4,020,800 DIVERT DISP/TONN | 28,589,217 140,208 100 | | |
| Expanded Blue | 90,300,000 DEPOTS MRF, COMP | 0 | 16,147,398 DIV RT | 3,229,480 20% | -14,630,400 DIVERT DISP/TONN | 18,817,032 146,304 100 | | |
| Wet / Dry | 100,300,000 MRF, COMP & DEPOT INT CAPTL | 10,030,000 Reserve | 20,599,969 DIV RT | 3,089,995 15% | -19,812,000 DIVERT DISP/TONN | 17,943,844 198,120 100 | | |
| Mixed Waste a | 130,000,000 FAC COMP | 39,000,000 Reserve | 30,491,730 DIV RT | 4,573,760 15% | -20,116,800 DIVERT DISP/TONN | 29,128,318 201,168 100 | | |
| Mixed Waste b | 150,000,000 | 45,000,000 Reserve | 30,491,730 DIV RT | 4,573,760 15% | -27,127,200 DIVERT DISP/TONN | 24,299,399 271,272 100 | | |

EFFECTS ANALYSIS OF 3R COMMITMENTS

PEEL

C-23

DIVERSION COSTS PER HOUSEHOLD

GROWTH 30%

| | 3R Capital | Annual Cost of Diversion | Residential Share of Annual Costs % | \$ | Total Business Tax (\$000s) | Percent Business Tax |
|------------|---------------|--------------------------------|--|------------|--------------------------------------|----------------------------|
| | | | | | 124,809 | |
| Existing | 0 | 3,568,006 | 51% | 1,819,683 | 1,748 | 1% |
| Committed | 90,300,000 | 16,723,812 | 51% | 8,529,144 | 8,195 | 5% |
| Dir Cost A | 90,300,000 | 18,589,217 | 51% | 9,480,500 | 9,109 | 6% |
| Dir Cost B | 90,300,000 | 28,589,217 | 51% | 14,580,500 | 9,220 | 6% |
| Expanded | 90,300,000 | 18,817,032 | 51% | 9,596,686 | 9,220 | 6% |
| Wet/dry | 90,270,000 | 17,943,844 | 51% | 9,151,360 | 8,792 | 5% |
| Mixed a | 91,000,000 | 29,128,318 | 51% | 14,855,442 | 14,273 | 9% |
| Mixed b | 105,000,000 | 24,299,399 | 51% | 12,392,693 | 11,907 | 7% |

| | Existing Residential Costs | Cost of Commitment | Total Future Residential Costs | Total Future Households | Costs Per Household Future | Existing | Percent Change |
|------------|----------------------------------|-----------------------|--------------------------------------|-------------------------------|----------------------------------|----------|-------------------|
| Existing | 0 | 1,819,683 | 1,819,683 | 332,295 | 0 | 8 | 0% |
| Committed | 1,819,683 | 6,709,461 | 9,342,245 | 332,295 | 28 | 8 | 255% |
| Dir Cost A | 1,819,683 | 7,660,818 | 10,293,602 | 332,295 | 31 | 8 | 291% |
| Dir Cost B | 1,819,683 | 12,760,818 | 15,393,602 | 332,295 | 46 | 8 | 485% |
| Expanded | 1,819,683 | 7,777,003 | 10,409,787 | 332,295 | 31 | 8 | 295% |
| Wet/dry | 1,819,683 | 7,331,677 | 9,964,462 | 332,295 | 30 | 8 | 278% |
| Mixed a | 1,819,683 | 13,035,759 | 15,668,543 | 332,295 | 47 | 8 | 495% |
| Mixed b | 1,819,683 | 10,573,011 | 13,205,795 | 332,295 | 40 | 8 | 402% |

Note: Household growth is used to show the effect of property assessment growth, but commercial/industrial assessment growth will not change the taxation split in the future. Moreover, new household growth will decrease the existing household cost for diversion, while future household growth beyond the period shown here, but still serviced by the committed capital is not included in the analysis.

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

PEEL

MUNICIPAL TAXATION PER HOUSEHOLD

C-24

| | Total Municipal Taxation (\$000) | Existing Cost of Diversion (\$000) | Annual Cost of Commitment (\$000) | Existing Diversion Cost as a Percent of Total Taxation | Future Diversion Cost as a Percent of Total Taxation |
|------------|---|---|--|---|---|
| Existing | 334,661 | 0 | 3,568 | 0% | 1% |
| Committed | 334,661 | 1,820 | 16,724 | 1% | 6% |
| Dir Cost A | 334,661 | 1,820 | 18,589 | 1% | 6% |
| Dir Cost B | 334,661 | 1,820 | 28,589 | 1% | 9% |
| Expanded | 334,661 | 1,820 | 18,817 | 1% | 6% |
| Wet/dry | 334,661 | 1,820 | 17,944 | 1% | 6% |
| Mixed a | 334,661 | 1,820 | 29,128 | 1% | 9% |
| Mixed b | 334,661 | 1,820 | 24,299 | 1% | 8% |

| | Total Municipal Taxation Per Hshold | Cost of Diversion Commitment Per Hshold | Percent Increase in Household Taxation |
|------------|--|--|---|
| Existing | 943 | 8 | 1% |
| Committed | 943 | 28 | 3% |
| Dir Cost A | 943 | 31 | 3% |
| Dir Cost B | 943 | 46 | 5% |
| Expanded | 943 | 31 | 3% |
| Wet/dry | 943 | 30 | 3% |
| Mixed a | 943 | 47 | 5% |
| Mixed b | 943 | 40 | 4% |

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

PEEL

MUNICIPAL DEBT

C-25

| | Total Existing Debt (\$000) | Total Diversion Debt (\$000) | Percent Increase |
|------------|--------------------------------------|---------------------------------------|---------------------|
| Existing | 107,801 | 0 | 0% |
| Committed | 107,801 | 90,300 | 84% |
| Dir Cost A | 107,801 | 90,300 | 84% |
| Dir Cost B | 107,801 | 90,300 | 84% |
| Expanded | 107,801 | 90,300 | 84% |
| Wet/dry | 107,801 | 90,270 | 84% |
| Mixed a | 107,801 | 91,000 | 84% |
| Mixed b | 107,801 | 105,000 | 97% |

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

PEEL

DEBT PAYMENTS

C-26

| | Existing Debt Charges (\$000) | Existing Expenditures (\$000) | Percent Existing Debt Charges / Expenditures | |
|-------------------|--|---|---|----------|
| Existing | 38,951 | 754,243 | 5.2% | |
| Committed | 38,951 | 754,243 | 5.2% | |
| Dir Cost A | 38,951 | 754,243 | 5.2% | |
| Dir Cost B | 38,951 | 754,243 | 5.2% | |
| Expanded | 38,951 | 754,243 | 5.2% | |
| Wet/dry | 38,951 | 754,243 | 5.2% | |
| Mixed a | 38,951 | 754,243 | 5.2% | |
| Mixed b | 38,951 | 754,243 | 5.2% | |
| | Future Commitment D-Charges | Future Debt Charges Committed Plus Existing | Percent Future Debt Charges to Expenditures | Increase |
| Existing | 0 | 38,951 | 5.2% | 0.0% |
| Committed | 14,071 | 53,022 | 7.0% | 1.9% |
| Dir Cost A | 14,071 | 53,022 | 7.0% | 1.9% |
| Dir Cost B | 14,071 | 53,022 | 7.0% | 1.9% |
| Expanded | 14,071 | 53,022 | 7.0% | 1.9% |
| Wet/dry | 14,066 | 53,017 | 7.0% | 1.9% |
| Mixed a | 14,180 | 53,131 | 7.0% | 1.9% |
| Mixed b | 16,361 | 55,312 | 7.3% | 2.2% |

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS

PEEL

DEBT CAPACITY

C-27

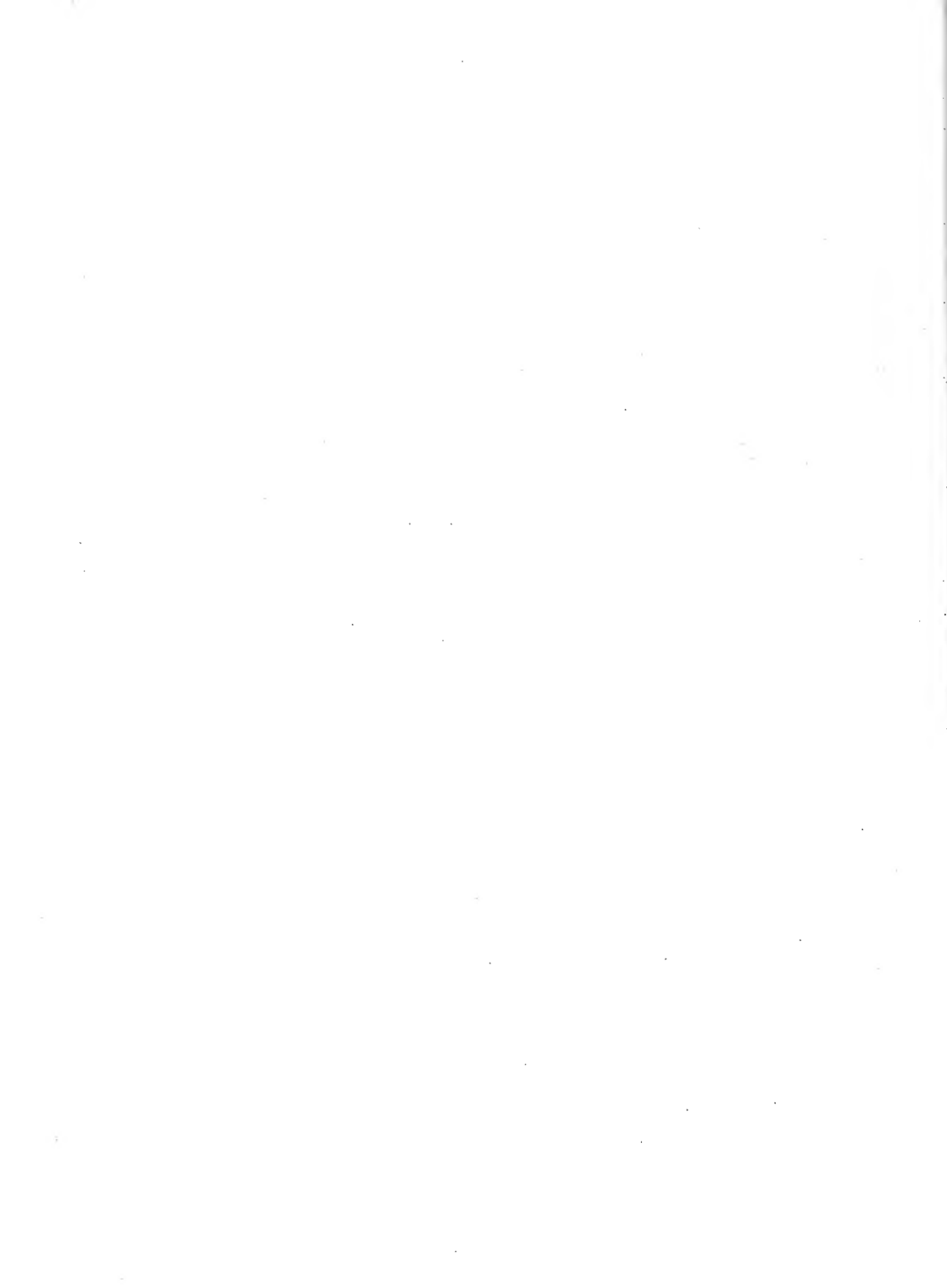
| | Existing Total Available Debt Capacity | Existing Debt | Current Remaining Debt Capacity | Percent Remaining | Committed Diversion | Percent Capacity Remaining After Committed |
|------------|--|------------------|--|----------------------|------------------------|--|
| Existing | 586,748 | 107,801 | 478,947 | 82% | 0 | 82% |
| Committed | 586,748 | 107,801 | 478,947 | 82% | 90,300 | 66% |
| Dir Cost A | 586,748 | 107,801 | 478,947 | 82% | 90,300 | 66% |
| Dir Cost B | 586,748 | 107,801 | 478,947 | 82% | 90,300 | 66% |
| Expanded | 586,748 | 107,801 | 478,947 | 82% | 90,300 | 66% |
| Wet/dry | 586,748 | 107,801 | 478,947 | 82% | 90,270 | 66% |
| Mixed a | 586,748 | 107,801 | 478,947 | 82% | 91,000 | 66% |
| Mixed b | 586,748 | 107,801 | 478,947 | 82% | 105,000 | 64% |

Source: Future Urban Research

EFFECTS ANALYSIS OF 3R COMMITMENTS**PEEL****FUTURE GTA HOUSEHOLDS****C-28**

| | 1991 Households | New Households | Total Future Households | Percent Increase |
|-------------------|----------------------------|---------------------------|--|-----------------------------|
| Existing | 229,670 | 102,625 | 332,295 | 45% |
| Committed | 229,670 | 102,625 | 332,295 | 45% |
| Dir Cost A | 229,670 | 102,625 | 332,295 | 45% |
| Dir Cost B | 229,670 | 102,625 | 332,295 | 45% |
| Expanded | 229,670 | 102,625 | 332,295 | 45% |
| Wet/dry | 229,670 | 102,625 | 332,295 | 45% |
| Mixed a | 229,670 | 102,625 | 332,295 | 45% |
| Mixed b | 229,670 | 102,625 | 332,295 | 45% |

Source: Hardy Stevenson and Associates



SCHEDULE D:
EFFECTS TABLES

REGION OF DURHAM

SYSTEM NET EFFECTS TABLE

Municipality: DURHAM REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|

Potential for
Impact on
Local
Taxpayers

Total increase in the
net general municipal
levy

Total Municipal Taxation
-- \$189 million

See Impact on Provincial Treasury

Existing

Annual Cost
-- \$2,094,865

Annual Cost
-- \$2,094,865

Percent -- 1.1%

Percent -- 1.1%

Existing Committed

Annual Cost
-- \$2,608,692

Annual Cost
-- \$2,608,692

Percent -- 1.3%

Percent -- 1.3%

Direct Cost A

Annual Cost
-- \$2,008,381

Annual Cost
-- \$2,008,381

Percent -- 1.1%

Percent -- 1.1%

Direct Cost B

Annual Cost
-- \$5,511,435

Annual Cost
-- \$5,511,435

Percent -- 2.9%

Percent -- 2.9%

SYSTEM NET EFFECTS TABLE
Municipality: DURHAM REGION

| Criteria | Indicator System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-------------------|--------------------------------|------------------------|--------------------------------|--------------------------------|
| | Expanded Blue Box | Annual Cost -- \$3,746,534 | | Annual Cost -- \$3,746,534 | |
| | | Percent -- 1.9% | | Percent -- 1.9% | |
| | Wet Dry | Annual Cost -- \$8,245,746 | | Annual Cost -- \$8,245,746 | |
| | | Percent -- 4.3% | | Percent -- 4.3% | |
| | Mixed Waste A | Annual Cost -- \$10,434,455 | | Annual Cost -- \$10,434,455 | |
| | | Percent -- 5.5% | | Percent -- 5.5% | |
| | Mixed Waste B | Annual Cost -- \$6,984,455 | | Annual Cost -- \$6,984,455 | |
| | | Percent -- 3.6% | | Percent -- 3.6% | |

Existing, committed
direct cost and
expanded
blue box -- low impact.
Wet/dry & mixed waste
-- medium impact

SYSTEM NET EFFECTS TABLE

Municipality: DURHAM REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|--|-----------|--------|--|----------------------------|---|---|
| Net general municipal levy, adjusted for commercial/industrial property assessment, expressed on a per household basis. | Existing | | Municipal taxation per household -- \$1,032 | | Municipal taxation per household --\$1,032 | |
| | | | Cost per household -- \$9.00 | | Cost per household -- \$9.00 | |
| | | | Percent -- 0.8% | | Percent --0.8% | |
| Existing Committed | | | Cost per household -- \$11.00 | | Cost per household -- \$11.00 | |
| | | | Percent -- 1.1% | | Percent --1.1% | |
| | | | | | | |
| Direct Cost A | | | Cost per household -- \$9.00 | | Cost per household -- \$9.00 | |
| | | | Percent -- 0.8% | | Percent -- 0.8% | |
| | | | | | | |
| Direct Cost B | | | Cost per household -- \$19.00 | | Cost per household -- \$19.00 | |
| | | | Percent -- 1.8% | | Percent -- 1.8% | |
| | | | | | | |

SYSTEM NET EFFECTS TABLE

D-4

Municipality: DURHAM REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|---------------|-------------------|------------------------------|-------------------------------|-------------------------------|-------------------------------|--------------------------------|
| | Expanded Blue Box | | Cost per household -- \$14.00 | | Cost per household -- \$14.00 | |
| | | | Percent -- 1.4% | | Percent -- 1.4% | |
| | Wet/Dry | | Cost per household -- \$27.00 | | Cost per household -- \$27.00 | |
| | | | Percent -- 2.6% | | Percent -- 2.6% | |
| | Mixed Waste A | | Cost per household -- \$33.00 | | Cost per household -- \$33.00 | |
| | | | Percent -- 3.2% | | Percent -- 3.2% | |
| Mixed Waste B | | Cost per household --\$23.00 | | Cost per household -- \$23.00 | | |
| | | Percent -- 2.2% | | Percent -- 2.2% | | |
| | | | | | | All systems nominal to low |

SYSTEM NET EFFECTS TABLE
Municipality: DURHAM REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|---|---|--------|--|-----------------------------------|--|--------------------------------|
| Potential for Impact on the Debt Burden of the municipality | | | | | | |
| | Amount of Debenture debt | | | | | |
| | Existing | | Existing debt -- \$35.3 million Debt related to diversion -- \$0 Percent -- 0% | See impact on Provincial Treasury | Debt related to diversion -- \$0 Percent -- 0% | |
| | Existing Committed | | Debt related to diversion -- \$3.8 million Percent -- 10.8% | | Debt related to diversion -- \$3.8 million Percent -- 10.8% | |
| | Direct Cost A & B (Same for both systems) | | Debt related to diversion -- \$3.8 million Percent -- 10.8% | | Debt related to diversion -- \$3.8 million Percent -- 10.8% | |
| | Expanded Blue Box | | Debt related to diversion -- \$9.0 million | | Debt related to diversion -- \$9.0 million | |

SYSTEM NET EFFECTS TABLE

D-6

Municipality: DURHAM REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|---------------|-----------|--------|--|----------------------------|--|--------------------------------------|
| Wet/Dry | | | Percent -- 25.5% | | Percent -- 25.5% | |
| | | | Debt related to diversion -- \$39.5 million | | Debt related to -- \$39.5 million | |
| | | | Percent -- 111.8% | | Percent -- 111.8% | |
| Mixed Waste A | | | Debt related to diversion -- \$50.0 million | | Debt related to diversion -- \$50.0 million | |
| | | | Percent -- 141.6% | | Percent -- 141.6% | |
| | | | | | | |
| Mixed Waste B | | | Debt related to diversion -- \$50.0 million | | Debt related to diversion -- \$50.0 million | |
| | | | Percent -- 141.6% | | Percent -- 141.6% | |
| | | | | | | |

Existing no effect.
Committed, direct cost
and expanded blue box
nominal to moderate
effect.
Wet/dry and mixed
waste high impact.

Municipality: DURHAM REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|

Annual debt payments as a percent of expenditures (OMB/ MMA guideline)

Existing

Existing Debt Charges
-- \$10.9 million

Existing Operating Expenditure
-- \$475.7 million

Existing Debt Charges as a % of Exp'ds
-- 2.3%

Diversion Debt Charges
-- \$0

Percent -- 0%

Debt Charges
-- \$0

Percent -- 0%

Existing Committed

Diversion Debt Charges
-- \$601,000

Percent -- 0.1%

Debt Charges
-- \$601,000

Percent -- 0.1%

Direct Cost A & B
(Same for both systems)

Diversion Debt Charges
-- \$600,000

Percent -- 0.1%

Debt Charges
-- \$600,000

Percent -- 0.1%

SYSTEM NET EFFECTS TABLE

D-8

Municipality: DURHAM REGION

| Criteria Indicator System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|---------------------------|--|-------------------------|--------------------------------|---|
| Expanded Blue Box | | | | |
| | Diversion Debt Charges -- \$1,402,000 | | Debt Charges -- \$1,402,000 | |
| | Percent -- 0.3% | | Percent -- 0.3% | |
| Wet/Dry | | | | |
| | Diversion Debt Charges -- \$6,155,000 | | Debt Charges -- \$6,155,000 | |
| | Percent -- 1.3% | | Percent -- 1.3% | |
| Mixed Waste A | | | | |
| | Diversion Debt Charges -- \$7,791,000 | | Debt Charges -- \$7,791,000 | |
| | Percent -- 1.6% | | Percent -- 1.6% | |
| Mixed Waste B | | | | |
| | Diversion Debt Charges -- \$7,791,000 | | Debt Charges -- \$7,791,000 | |
| | Percent --1.6% | | Percent --1.6% | |
| | | | | Existing no effect. Committed, direct cost and expanded blue box nominal to moderate effect. Wet/dry and mixed waste high impact. |

Municipality: DURHAM REGION

| Criteria | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------------------------|----------------------------|--------------------|--------------------------------------|
|----------|-----------------------------|----------------------------|--------------------|--------------------------------------|

Available debt capacity
(OMB/MMA guideline)

Existing

Existing Debt Capacity
-- \$335 million

Debt Related to Diversion
-- \$0

Debt Related to Diversion
--\$0

Percent of capacity -- 0%

Percent of capacity -- 0%

Existing Committed

Debt Related to Diversion
-- \$3.8 million

Debt Related to Diversion
--\$3.8 million

Percent of capacity -- 1.1%

Percent of capacity -- 1.1%

Direct Cost A & B
(Same for both
systems)

Debt Related to Diversion
-- \$3.8 million

Debt related to Diversion
-- \$3.8 million

Percent of capacity -- 1.1%

Percent of capacity -- 1.1%

SYSTEM NET EFFECTS TABLE

D-10

Municipality: DURHAM REGION

| Criteria Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|--------------------|-------------------|---|------------------------|---|--------------------------------|
| | Expanded Blue Box | Debt Related to Diversion -- \$3.8 million | | Debt Related to Diversion -- \$3.8 million | |
| | | Percent of capacity -- 1.1% | | Percent of capacity --1.1% | |
| | Wet/Dry | Debt Related to Diversion -- \$39.5 million | | Debt Related to Diversion -- \$39.5 million | |
| | | Percent of capacity -- 11.8% | | Percent of capacity --11.8% | |
| | Mixed Waste A | Debt Related to Diversion -- \$50.0 million | | Debt Related to Diversion -- \$50.0 million | |
| | | Percent of capacity -- 14.9% | | Percent of capacity -- 14.9% | |
| | Mixed Waste B | Debt Related to Diversion -- \$50.0 million | | Debt Related to Diversion -- \$50.0 million | |
| | | Percent of capacity --14.9% | | Percent of capacity --14.9% | |
| | | | | | Existing no effect. |

SYSTEM NET EFFECTS TABLE

Municipality: DURHAM REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|--|--------------------|--------|--|----------------------------|---------------------------|--|
| Potential for Impact on Municipal Reserve Funds | | | | | | Committed, direct cost and expanded blue box nominal to moderate effect. Wet/dry and mixed waste high impact. |
| Total amount of reserve funds | | | | | | |
| | Existing | | Existing reserves & reserve funds -- \$199 million | | NOT AFFECTED BY DIVERSION | |
| | Existing Committed | | | | NOT AFFECTED BY DIVERSION | |
| | Direct Cost A | | | | NOT AFFECTED BY DIVERSION | |
| | Direct Cost B | | \$1.5 million addition to reserves -- 0.7% addition | | | |

SYSTEM NET EFFECTS TABLE

D-12

Municipality: DURHAM REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|---------------------------|-----------|-------------------|---|----------------------------|--------------------|---|
| Reserves per household | Existing | Expanded Blue Box | NOT AFFECTED BY DIVERSION | | | |
| | | Wet/Dry | NOT AFFECTED BY DIVERSION | | | |
| | | Mixed Waste A | NOT AFFECTED BY DIVERSION | | | |
| | | Mixed Waste B | NOT AFFECTED BY DIVERSION | | | Criteria not affected by diversion except for direct cost B |
| | Existing | | Existing reserves per household -- \$1,460 | | | |
| Existing Committed | | | NOT AFFECTED BY DIVERSION | | | |
| | | | NOT AFFECTED BY DIVERSION | | | |
| Direct Cost A | | | NOT AFFECTED BY DIVERSION | | | |

Municipality: DURHAM REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|---------------------------------------|--------------------|-------------------|------------------------------------|------------------------|---------------------------|--------------------------------|
| Reserves as a Percent of Expenditures | Existing | Direct Cost B | \$11.03 per household | | | |
| | | | -- 0.7% addition | | | |
| | | Expanded Blue Box | | | NOT AFFECTED BY DIVERSION | |
| | | Wet/Dry | | | NOT AFFECTED BY DIVERSION | |
| | | Mixed Waste A | | | NOT AFFECTED BY DIVERSION | |
| | Existing Committed | Mixed Waste B | | | NOT AFFECTED BY DIVERSION | |
| | | | | | | |
| | | | Reserves equal 42% of expenditures | | | |
| | | | | | NOT AFFECTED BY DIVERSION | |
| | | | | | NOT AFFECTED BY DIVERSION | |
| Direct Cost A | | | | | | |
| | | | | | NOT AFFECTED BY DIVERSION | |

Criteria

System

Mitigation/
Enhancement

System Net Effects

System
Net Effects
by Criteria

0.3% of operating expenditures

NOT AFFECTED BY DIVERSION

NOT AFFECTED BY DIVERSION

NOT AFFECTED BY DIVERSION

NOT AFFECTED BY DIVERSION

Criteria not affected by
diversion systems
except for
Direct Cost B

Total municipal wages,
salaries, materials &
contract expenditures
per household

Municipality: DURHAM REGION

| Criteria Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|-----------------------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|
| | | | | | |

| | | | | | |
|--------------------|--|--|--|--|--|
| Existing | Operating expenditures equal \$3,490 per household | | | | |
| | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | | |
| Existing Committed | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | | |
| | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | | |
| Direct Cost A & B | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | | |
| | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | | |
| Expanded Blue Box | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | | |
| | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | | |
| Wet/Dry | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | | |
| | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | | |
| Mixed Waste A | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | | |
| | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | | |
| Mixed Waste B | SERVICE LEVELS | | | | |
| | | | | | |

SYSTEM NET EFFECTS TABLE

D-16

Municipality: DURHAM REGION

Criteria

Indicator
SystemMunicipal Finance
EffectMitigation/
Enhancement

System Net Effects

System
Net Effects
by Criteria

NOT AFFECTED BY DIVERSION

Criteria not affected by
diversionCurrent expenditures
by department per
household

Existing

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Existing Committed

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Direct Cost A & B

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Expanded Blue Box

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Wet/Dry

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Municipality: DURHAM REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|

Mixed Waste A

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Mixed Waste B

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Criteria not affected by
diversion

Potential for
Impact on the
Provincial
Treasury

Amount of Provincial
funding

Pending funding arrangements/
negotiations, the analysis was
done in the absence of mitigation.
However, a potential level of Provincial
funding may approach 30% of capital costs.

Pending funding
arrangements

SYSTEM NET EFFECTS TABLE

D-18

Municipality: DURHAM REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|

Potential for
Impact on
Private
Sector
Industries

Amount of private
sector funding

Existing

NOT AFFECTED BY DIVERSION

Existing Committed

NOT AFFECTED BY DIVERSION

Direct Cost A & B

NOT AFFECTED BY DIVERSION

Expanded Blue Box

NOT AFFECTED BY DIVERSION

Wet/Dry

NOT AFFECTED BY DIVERSION

Mixed Waste A

NOT AFFECTED BY DIVERSION

Mixed Waste B

NOT AFFECTED BY DIVERSION

Amount of private
sector costs

SYSTEM NET EFFECTS TABLE

Municipality: DURHAM REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|---|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|
| | Existing | | NOT AFFECTED BY DIVERSION | | | |
| | Existing Committed | | NOT AFFECTED BY DIVERSION | | | |
| | Direct Cost A & B | | NOT AFFECTED BY DIVERSION | | | |
| | Expanded Blue Box | | NOT AFFECTED BY DIVERSION | | | |
| | Wet/Dry | | NOT AFFECTED BY DIVERSION | | | |
| | Mixed Waste A | | NOT AFFECTED BY DIVERSION | | | |
| | Mixed Waste B | | NOT AFFECTED BY DIVERSION | | | |
| | Amount of costs passed on through higher prices | | | | | |
| | Existing | | NOT AFFECTED BY DIVERSION | | | |
| | Existing Committed | | NOT AFFECTED BY DIVERSION | | | |

SYSTEM NET EFFECTS TABLE

Municipality: DURHAM REGION

D-20

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|--|-----------|-------------------|--|----------------------------|--|--------------------------------------|
| Amount of private sector costs financed through taxes, incentives, economics, etc. | Existing | Direct Cost A & B | NOT AFFECTED BY DIVERSION | | | |
| | | Expanded Blue Box | NOT AFFECTED BY DIVERSION | | | |
| | | Wet/Dry | NOT AFFECTED BY DIVERSION | | | |
| | | Mixed Waste A | NOT AFFECTED BY DIVERSION | | | |
| | | Mixed Waste B | NOT AFFECTED BY DIVERSION | | | |
| | | | | | | |
| | | | Total municipal taxes paid by the commercial/ industrial sector -- \$57.3 million | | | |
| | | | Taxes Related to Diversion -- \$859,000 | | Taxes Related to Diversion -- \$859,000 | |

Municipality: DURHAM REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|--------------------|-----------|--------|---|------------------------|---|--------------------------------|
| Existing Committed | | | Percent -- 1.4% | | Percent -- 1.4% | |
| | | | Taxes Related to Diversion -- \$1,070,000 | | Taxes Related to Diversion -- \$1,070,000 | |
| | | | Percent -- 1.9% | | Percent -- 1.9% | |
| | | | Taxes Related to Diversion -- \$823,000 | | Taxes Related to Diversion -- \$823,000 | |
| Direct Cost A & B | | | Percent -- 1.4% | | Percent -- 1.4% | |
| | | | Taxes Related to Diversion -- \$1,536,000 | | Taxes Related to Diversion -- \$1,536,000 | |
| | | | Percent -- 2.6% | | Percent -- 2.6% | |
| | | | Taxes Related to Diversion -- \$3,381,000 | | Taxes Related to Diversion -- \$3,381,000 | |
| Expanded Blue Box | | | Percent -- 5.9% | | Percent -- 5.9% | |
| | | | Taxes Related to Diversion -- \$4,278,500 | | Taxes Related to Diversion -- \$4,278,500 | |
| | | | Percent -- 7.4% | | Percent -- 7.4% | |
| | | | | | | |
| Wet/Dry | | | Percent -- 1.4% | | Percent -- 1.4% | |
| | | | Taxes Related to Diversion -- \$1,070,000 | | Taxes Related to Diversion -- \$1,070,000 | |
| | | | Percent -- 1.9% | | Percent -- 1.9% | |
| | | | Taxes Related to Diversion -- \$823,000 | | Taxes Related to Diversion -- \$823,000 | |
| Mixed Waste A | | | Percent -- 1.4% | | Percent -- 1.4% | |
| | | | Taxes Related to Diversion -- \$1,536,000 | | Taxes Related to Diversion -- \$1,536,000 | |
| | | | Percent -- 2.6% | | Percent -- 2.6% | |
| | | | Taxes Related to Diversion -- \$3,381,000 | | Taxes Related to Diversion -- \$3,381,000 | |

SYSTEM NET EFFECTS TABLE

D-22

Municipality: DURHAM REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|---------------|-----------|--------|--|----------------------------|--|---|
| Mixed Waste B | | | | | | |
| | | | Taxes Related to Diversion -- \$2,864,000 | | Taxes Related to Diversion -- \$2,864,000 | |
| | | | Percent -- 5.0% | | Percent -- 5.0% | Existing, committed, direct cost and expanded blue box -- low effect. Wet/dry & mixed waste medium effect. |

METROPOLITAN TORONTO

Municipality: METROPOLITAN TORONTO

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|

| | | | | | | |
|--|--|----------|--|-----------------------------------|------------------|--|
| Potential for Impact on Local Taxpayers | Total increase in the net general municipal levy | Existing | Total Municipal Taxation -- \$1.7 million | See Impact on Provincial Treasury | | |
| | | | | | | |
| | | | | | | |
| | Existing Committed | Existing | Annual Cost | | Annual Cost | |
| | | | -- \$23,747,137 | | -- \$23,747,137 | |
| | | | Percent -- 1.4% | | Percent -- 1.4% | |
| | Direct Cost A | Existing | Annual Cost | | Annual Cost | |
| | | | -- \$42,362,618 | | -- \$42,362,618 | |
| | | | Percent -- 2.5% | | Percent -- 2.5% | |
| | Direct Cost B | Existing | Annual Cost | | Annual Cost | |
| | | | -- \$57,773,605 | | -- \$57,773,605 | |
| | | | Percent -- 3.3% | | Percent -- 3.3% | |
| | Expanded Blue Box | Existing | Annual Cost | | Annual Cost | |
| | | | -- \$102,773,605 | | -- \$102,773,605 | |
| | | | Percent -- 6.0% | | Percent -- 6.0% | |
| | Expanded Blue Box | Existing | Annual Cost | | Annual Cost | |
| | | | -- \$59,317,648 | | -- \$59,317,648 | |
| | | | | | | |

SYSTEM NET EFFECTS TABLE

M-2

Municipality: METROPOLITAN TORONTO

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|---------------|--------|---------------------------------|----------------------------|---------------------------------|--|
| | Wet Dry | | Percent -- 3.4% | | Percent -- 3.4% | Existing, committed and wet/dry -- low impact direct cost and expanded blue box Wet/dry & mixed waste -- medium impact |
| | | | Annual Cost -- \$43,311,565 | | Annual Cost -- \$43,311,565 | |
| | | | Percent -- 2.5% | | Percent -- 2.5% | |
| | Mixed Waste A | | Annual Cost -- \$138,071,300 | | Annual Cost -- \$138,071,300 | |
| | | | Percent -- 8.0% | | Percent -- 8.0% | |
| | | | | | | |
| | Mixed Waste B | | Annual Cost -- \$116,109,288 | | Annual Cost -- \$116,109,288 | |
| | | | Percent -- 6.9% | | Percent -- 6.9% | |
| | | | | | | |

Net general municipal
levy, adjusted for
commercial/industrial
property assessment,
expressed on a per
household basis.

Municipality: METROPOLITAN TORONTO

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------------------|---|----------------------------|---|--------------------------------------|
| | | Existing | Municipal taxation per household -- \$1,016 | | Municipal taxation per household -- \$1,016 | |
| | | | Cost per household -- \$13.00 | | Cost per household -- \$13.00 | |
| | | | Percent -- 1.3% | | Percent -- 1.3% | |
| | | Existing Committed | | | | |
| | | | Cost per household -- \$23.00 | | Cost per household -- \$23.00 | |
| | | | Percent -- 2.2% | | Percent --2.2% | |
| | | Direct Cost A | | | | |
| | | | Cost per household -- \$31.00 | | Cost per household -- \$31.00 | |
| | | | Percent -- 3.1% | | Percent -- 3.1% | |
| | | Direct Cost B | | | | |
| | | | Cost per household -- \$54.00 | | Cost per household -- \$54.00 | |
| | | | Percent -- 5.3% | | Percent -- 5.3% | |

SYSTEM NET EFFECTS TABLE

M-4

Municipality: METROPOLITAN TORONTO

| Criteria Indicator System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|---------------------------|-------------------------------|------------------------|-------------------------------|--|
| Expanded Blue Box | | | | |
| | Cost per household -- \$31.00 | | Cost per household -- \$31.00 | |
| | Percent -- 3.1% | | Percent -- 3.1% | |
| Wet/Dry | | | | |
| | Cost per household -- \$23.00 | | Cost per household -- \$23.00 | |
| | Percent -- 2.3% | | Percent -- 2.3% | |
| Mixed Waste A | | | | |
| | Cost per household -- \$72.00 | | Cost per household -- \$72.00 | |
| | Percent -- 7.1% | | Percent -- 7.1% | |
| Mixed Waste B | | | | |
| | Cost per household -- \$60.00 | | Cost per household -- \$60.00 | |
| | Percent -- 5.9% | | Percent -- 5.9% | Existing, committed, wet/dry -- low impact |

SYSTEM NET EFFECTS TABLE

Municipality: METROPOLITAN TORONTO

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|---|-----------|--------|---|--------------------------------------|---|---|
| Potential for Impact on the Debt Burden of the municipality | | | | | | direct cost expanded blue box and mixed waste A -- medium impact, mixed waste B - high impact |
| Amount of Debenture debt | | | | | | |
| Existing | | | Existing debt -- \$69.7 million | See impact on Provincial Treasury | Debt related to diversion -- \$0 | |
| | | | Debt related to diversion -- \$0 | | Percent -- 0% | |
| Existing Committed | | | Debt related to diversion -- \$135.7 million | | Debt related to diversion -- \$135.7 million | |
| | | | Percent -- 19.5% | | Percent -- 19.5% | |
| Direct Cost A & B | | | Debt related to diversion | | Debt related to diversion | |

SYSTEM NET EFFECTS TABLE

M-6

Municipality: METROPOLITAN TORONTO

| Criteria Indicator System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|---------------------------|---|----------------------------|---|---|
| | -- \$135.7 million | | -- \$135.7 million | |
| | Percent -- 19.5% | | Percent -- 19.5% | |
| Expanded Blue Box | Debt related to diversion -- \$135.7 million | | Debt related to diversion -- \$135.7 million | |
| | Percent -- 19.5% | | Percent -- 19.5% | |
| Wet/Dry | Debt related to diversion -- \$166.7 million | | Debt related to -- \$166.7 million | |
| | Percent -- 23.9% | | Percent -- 23.9% | |
| Mixed Waste A | Debt related to diversion -- \$241.0 million | | Debt related to diversion -- \$241.0 million | |
| | Percent -- 34.6% | | Percent -- 34.6% | |
| Mixed Waste B | Debt related to diversion -- \$265.9 million | | Debt related to diversion -- \$265.9 million | |
| | Percent -- 38.1% | | Percent -- 38.1% | Existing no effect. All other systems moderate |

Municipality: METROPOLITAN TORONTO

| Criteria Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|---|--------|--|------------------------|--------------------|--------------------------------|
| Annual debt payments as a percent of expenditures (OMB/MMA guideline) | | | | | |
| Existing | | | | | |
| | | Existing Debt Charges | | | |
| | | -- \$193 million | | | |
| | | Existing Operating Expenditure | | | |
| | | -- \$4.5 billion | | | |
| | | Existing Debt Charges as a % of Exp'ds | | | |
| | | -- 4.3% | | | |
| | | Diversion Debt Charges | | Debt Charges | |
| | | -- \$0 | | -- \$0 | |
| | | Percent -- 0% | | Percent -- 0% | |
| Existing Committed | | | | | |
| | | Diversion Debt Charges | | Debt Charges | |
| | | -- \$21.1 million | | -- \$21.1 million | |
| | | Percent -- 0.5% | | Percent -- 0.5% | |

effect.

SYSTEM NET EFFECTS TABLE

M-8

Municipality: METROPOLITAN TORONTO

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|-------------------|-----------|--------|---|----------------------------|-----------------------------------|--------------------------------------|
| Direct Cost A & B | | | | | | |
| | | | Diversion Debt Charges -- \$21.1 million | | Debt Charges -- \$21.1 million | |
| | | | Percent -- 0.5% | | Percent -- 0.5% | |
| Expanded Blue Box | | | | | | |
| | | | Diversion Debt Charges -- \$21,100,000 | | Debt Charges -- \$21,100,000 | |
| | | | Percent -- 0.4% | | Percent -- 0.4% | |
| Wet/Dry | | | | | | |
| | | | Diversion Debt Charges -- \$25,900,000 | | Debt Charges -- \$25,900,000 | |
| | | | Percent -- 0.5% | | Percent -- 0.5% | |
| Mixed Waste A | | | | | | |
| | | | Diversion Debt Charges -- \$37,600,000 | | Debt Charges -- \$37,600,000 | |
| | | | Percent -- 0.8% | | Percent -- 0.8% | |

Municipality: METROPOLITAN TORONTO

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|--|-----------|---------------|---|----------------------------|--|--|
| | | Mixed Waste B | Diversion Debt Charges -- \$41,400,000 | | Debt Charges -- \$41,400,000 | |
| | | | Percent --0.9% | | Percent --0.9% | Existing no effect. All other systems moderate effect. |
| | | | | | | |
| | | | | | | |
| Available debt capacity (OMB/MMA guideline) | Existing | | Existing Debt Capacity -- \$2.8 billion | | | |
| | | | Debt Related to Diversion -- \$0 | | Debt Related to Diversion --\$0 | |
| | | | Percent of capacity -- 0% | | Percent of capacity -- 0% | |
| | | | | | | |
| Existing Committed | | | Debt Related to Diversion -- \$135.7 million | | Debt Related to Diversion --\$135.7 million | |
| | | | Percent of capacity -- 4.8% | | Percent of capacity -- 4.8% | |

SYSTEM NET EFFECTS TABLE

M-10

Municipality: METROPOLITAN TORONTO

| Criteria Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|-----------------------|--------|---|----------------------------|---|--------------------------------------|
| Direct Cost A & B | | | | | |
| | | Debt Related to Diversion -- \$135.7 million | | Debt related to Diversion -- \$135.7 million | |
| | | Percent of capacity -- 4.8% | | Percent of capacity -- 4.8% | |
| Expanded Blue Box | | | | | |
| | | Debt Related to Diversion -- \$135.7 million | | Debt Related to Diversion -- \$135.7 million | |
| | | Percent of capacity -- 4.8% | | Percent of capacity --4.8% | |
| Wet/Dry | | | | | |
| | | Debt Related to Diversion -- \$166.8 million | | Debt Related to Diversion -- \$166.8 million | |
| | | Percent of capacity -- 5.9% | | Percent of capacity --5.9% | |
| Mixed Waste A | | | | | |
| | | Debt Related to Diversion -- \$240.9 million | | Debt Related to Diversion -- \$240.9 million | |

Municipality: METROPOLITAN TORONTO

| Criteria | Indicator System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|---|------------------|--|------------------------|--|---|
| Potential for Impact on Municipal Reserve Funds | Mixed Waste B | Percent of capacity -- 8.5% | | Percent of capacity -- 8.5% | |
| | | Debt Related to Diversion -- \$265.9 million | | Debt Related to Diversion -- \$265.9 million | |
| | | Percent of capacity --9.4% | | Percent of capacity --9.4% | |
| | | | | | Existing no effect. Committed, direct cost and expanded blue box nominal to moderate effect. Wet/dry and mixed waste high impact. |
| Total amount of reserve funds | Existing | Existing reserves & reserve funds -- \$986 million | | | |
| NOT AFFECTED BY DIVERSION | | | | | |

SYSTEM NET EFFECTS TABLE

M-12

Municipality: METROPOLITAN TORONTO

| Criteria Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|--------------------|--------|--------------------------|----------------------------|-----------------------------------|--------------------------------|
| Existing Committed | | | | | |
| | | | | NOT AFFECTED BY DIVERSION | |
| Direct Cost A | | | | | |
| | | | | NOT AFFECTED BY DIVERSION | |
| Direct Cost B | | | | | |
| | | | | \$45 million additional | |
| | | | | -- 4.6% of total | |
| Expanded Blue Box | | | | | |
| | | | | NOT AFFECTED BY DIVERSION | |
| Wet/Dry | | | | | |
| | | | | NOT AFFECTED BY DIVERSION | |
| Mixed Waste A | | | | | |
| | | | | Reserve reduced by \$25.0 million | |
| | | | | Percent -- 2.5% | |
| Mixed Waste B | | | | | |

Municipality: METROPOLITAN TORONTO

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|------------------------|-----------|--------------------|--|------------------------|--------------------|--|
| Reserves per household | | | Reserve reduced by \$50.0 million | | | |
| | | | Percent -- 5.1% | | | |
| | | | | | | Mixed waste nominal to moderate effect. All other systems no effect except for direct cost |
| | Existing | | Existing reserves per household -- \$1,115 | | | |
| | | | NOT AFFECTED BY DIVERSION | | | |
| | | Existing Committed | | | | |
| | | | NOT AFFECTED BY DIVERSION | | | |
| | | Direct Cost A | | | | |
| | | Direct Cost B | | | | |
| | | | NOT AFFECTED BY DIVERSION | | | |
| | | | \$5.20 per household -- 0.5% additional | | | |
| | | Expanded Blue Box | | | | |

Municipality: METROPOLITAN TORONTO

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|---------------------------------------|---------------|--|------------------------|--------------------|--------------------------------|
| | | | NOT AFFECTED BY DIVERSION | | | |
| | | Wet/Dry | | | | |
| | | Mixed Waste A | \$28.90 cost per household -- 2.6% of total | | | |
| | | Mixed Waste B | \$57.80 cost per household -- 5.1% of total | | | |
| | Reserves as a Percent of Expenditures | | | | | |
| | Existing | | Reserves equal 22% of expenditures | | | |
| | Existing Committed | | NOT AFFECTED BY DIVERSION | | | |
| | | | NOT AFFECTED BY DIVERSION | | | |
| | Direct Cost A | | NOT AFFECTED BY DIVERSION | | | |

Municipality: METROPOLITAN TORONTO

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|

| | | | | | | |
|--|-------------------|--|---------------------------|--|--|---|
| | Direct Cost B | | -- 0.9% additional | | | |
| | Expanded Blue Box | | NOT AFFECTED BY DIVERSION | | | |
| | Wet/Dry | | NOT AFFECTED BY DIVERSION | | | |
| | Mixed Waste A | | -- 0.5% of total | | | |
| | Mixed Waste B | | -- 1.0% of total | | | Direct cost positive impact mixed waste negative impact |

Potential for Impact on the level of municipal service

Total municipal wages, salaries, materials & contract expenditures

Municipality: METROPOLITAN TORONTO

| Criteria Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|-----------------------|--------------------|--|----------------------------|--------------------|---|
| | per household | | | | |
| | Existing | Operating expenditures equal \$5,118 per household | | | |
| | | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | Existing Committed | | | | |
| | | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | Direct Cost A & B | | | | |
| | | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | Expanded Blue Box | | | | |
| | | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | Wet/Dry | | | | |
| | | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |

SYSTEM NET EFFECTS TABLE

Municipality: METROPOLITAN TORONTO

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|

Mixed Waste A

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Mixed Waste B

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Criteria not affected by
diversion

Current expenditures
by department per
household

Existing

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Existing Committed

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Direct Cost A & B

SERVICE LEVELS

SYSTEM NET EFFECTS TABLE

Municipality: METROPOLITAN TORONTO

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|---|-------------------------------------|--------|--------------------------|---|--------------------|--------------------------------------|
| Potential for Impact on Private Sector Industries | Amount of Provincial funding | | | Pending funding arrangements/ negotiations, the analysis was done in the absence of mitigation. However, a potential level of Provincial funding may approach 30% of capital costs. | | Pending funding arrangements |
| | Amount of private sector funding | | | | | |
| | Existing | | | NOT AFFECTED BY DIVERSION | | |
| | Existing Committed | | | NOT AFFECTED BY DIVERSION | | |
| | Direct Cost A & B | | | NOT AFFECTED BY DIVERSION | | |
| | Expanded Blue Box | | | NOT AFFECTED BY DIVERSION | | |

Municipality: METROPOLITAN TORONTO

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|--------------------------------|-----------|--------------------|---------------------------|----------------------------|--------------------|--------------------------------------|
| | | Wet/Dry | NOT AFFECTED BY DIVERSION | | | |
| | | Mixed Waste A | NOT AFFECTED BY DIVERSION | | | |
| | | Mixed Waste B | NOT AFFECTED BY DIVERSION | | | |
| Amount of private sector costs | | | | | | |
| | | Existing | NOT AFFECTED BY DIVERSION | | | |
| | | Existing Committed | NOT AFFECTED BY DIVERSION | | | |
| | | Direct Cost A & B | NOT AFFECTED BY DIVERSION | | | |
| | | Expanded Blue Box | NOT AFFECTED BY DIVERSION | | | |
| | | Wet/Dry | NOT AFFECTED BY DIVERSION | | | |
| | | Mixed Waste A | NOT AFFECTED BY DIVERSION | | | |
| | | Mixed Waste B | NOT AFFECTED BY DIVERSION | | | |

SYSTEM NET EFFECTS TABLE

M-21

Municipality: METROPOLITAN TORONTO

Criteria

| Indicator System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|--|-----------------------------|----------------------------|--------------------|--------------------------------------|
| Amount of costs passed on through higher prices | | | | |
| Existing | | NOT AFFECTED BY DIVERSION | | |
| Existing Committed | | NOT AFFECTED BY DIVERSION | | |
| Direct Cost A & B | | NOT AFFECTED BY DIVERSION | | |
| Expanded Blue Box | | NOT AFFECTED BY DIVERSION | | |
| Wet/Dry | | NOT AFFECTED BY DIVERSION | | |
| Mixed Waste A | | NOT AFFECTED BY DIVERSION | | |
| Mixed Waste B | | NOT AFFECTED BY DIVERSION | | |
| Amount of private sector costs financed through taxes, incentives, economics, etc. | | | | |

SYSTEM NET EFFECTS TABLE

M-22

Municipality: METROPOLITAN TORONTO

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|--------------------|-----------|--------|---|----------------------------|--|--------------------------------------|
| Existing | | | Total municipal taxes paid by the commercial/ industrial sector -- \$89.7 million | | | |
| | | | Taxes Related to Diversion -- \$12,300,000 | | Taxes Related to Diversion -- \$12,300,000 | |
| | | | Percent -- 1.3% | | Percent -- 1.3% | |
| | | | | | | |
| Existing Committed | | | Taxes Related to Diversion -- \$22,000,000 | | Taxes Related to Diversion -- \$22,000,000 | |
| | | | Percent -- 2.5% | | Percent -- 2.5% | |
| | | | | | | |
| | | | | | | |
| Direct Cost A & B | | | Taxes Related to Diversion -- \$30,000,000 | | Taxes Related to Diversion -- \$30,000,000 | |
| | | | Percent -- 3.3% | | Percent -- 3.3% | |
| | | | | | | |
| | | | | | | |
| Expanded Blue Box | | | Taxes Related to Diversion -- \$30,800,000 | | Taxes Related to Diversion -- \$30,800,000 | |
| | | | Percent -- 3.4% | | Percent -- 3.4% | |
| | | | | | | |
| | | | | | | |

Municipality: METROPOLITAN TORONTO

| Criteria | Indicator | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|---------------|-----------|---|----------------------------|---|--|
| Wet/Dry | | Taxes Related to Diversion -- \$22,500,000 | | Taxes Related to Diversion -- \$22,500,000 | |
| | | Percent -- 2.5% | | Percent -- 2.5% | |
| Mixed Waste A | | Taxes Related to Diversion -- \$71,800,000 | | Taxes Related to Diversion -- \$71,800,000 | |
| | | Percent -- 8.0% | | Percent -- 8.0% | |
| Mixed Waste B | | Taxes Related to Diversion -- \$60,400,000 | | Taxes Related to Diversion -- \$60,400,000 | |
| | | Percent -- 6.7% | | Percent -- 6.7% | Existing, committed, and wet/dry -- low effect. direct cost and expanded blue box -- medium effect. Mixed waste high effect. |

REGION OF YORK

Municipality: YORK REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|--|--|--------|--|-----------------------------------|--|--------------------------------------|
| Potential for Impact on Local Taxpayers | | | | | | |
| | Total increase in the net general municipal levy | | Total Municipal Taxation -- \$207 million | See Impact on Provincial Treasury | | |
| | Existing | | Annual Cost -- \$2,226,701 Percent -- 1.1% | | Annual Cost -- \$2,226,701 Percent -- 1.1% | |
| | Existing Committed | | Annual Cost -- \$2,660,676 Percent -- 1.3% | | Annual Cost -- \$2,660,676 Percent -- 1.3% | |
| | Direct Cost A | | Annual Cost -- \$2,614,682 Percent -- 1.2% | | Annual Cost -- \$2,614,682 Percent -- 1.2% | |
| | Direct Cost B | | Annual Cost -- \$9,114,682 Percent -- 4.4% | | Annual Cost -- \$9,114,682 Percent -- 4.4% | |

SYSTEM NET EFFECTS TABLE

Municipality: YORK REGION

| Criteria Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|--------------------|---------------|--------------------------------|------------------------|--------------------------------|--|
| Expanded Blue Box | | Annual Cost -- \$4,411,676 | | Annual Cost -- \$4,411,676 | |
| | | Percent -- 2.1% | | Percent -- 2.1% | |
| | Wet Dry | Annual Cost -- \$16,009,088 | | Annual Cost -- \$16,009,088 | |
| | | Percent -- 7.7% | | Percent -- 7.7% | |
| Mixed Waste A | | Annual Cost -- \$23,598,462 | | Annual Cost -- \$23,598,462 | |
| | | Percent -- 11.4% | | Percent -- 11.4% | |
| | Mixed Waste B | Annual Cost -- \$20,034,462 | | Annual Cost -- \$20,034,462 | |
| | | Percent -- 9.7% | | Percent -- 9.7% | Existing, committed d/c/rev/heut and expanded blue box -- low impact. Wet/dry & mixed waste d/c/add/rev -- medium impact |

Net general municipal levy, adjusted for commercial/industrial property assessment, expressed on a per household basis.

Municipality: YORK REGION

Criteria

Indicator
SystemMunicipal Finance
EffectMitigation/
Enhancement

System Net Effects

System
Net Effects
by Criteria

Existing

Municipal taxation per
household -- \$1,040Municipal taxation per
household -- \$1,040Cost per
household -- \$10.00Cost per
household -- \$10.00

Percent -- 0.9%

Percent -- 0.9%

Existing Committed

Cost per
household -- \$12.00Cost per
household -- \$12.00

Percent -- 1.2%

Percent -- 1.2%

Direct Cost A

Cost per
household -- \$12.00Cost per
household -- \$12.00

Percent -- 1.2%

Percent -- 1.2%

Direct Cost B

Cost per
household -- \$32.00Cost per
household -- \$32.00

Percent -- 3.1%

Percent -- 3.1%

SYSTEM NET EFFECTS TABLE

Y-4

Municipality: YORK REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|-------------------|-----------|--------|----------------------------------|----------------------------|----------------------------------|---|
| Expanded Blue Box | | | | | | |
| | | | Cost per household -- \$17.00 | | Cost per household -- \$17.00 | |
| | | | Percent -- 1.6% | | Percent -- 1.6% | |
| Wet/Dry | | | | | | |
| | | | Cost per household -- \$53.00 | | Cost per household -- \$53.00 | |
| | | | Percent -- 5.1% | | Percent -- 5.1% | |
| Mixed Waste A | | | | | | |
| | | | Cost per household -- \$77.00 | | Cost per household -- \$77.00 | |
| | | | Percent -- 7.4% | | Percent -- 7.4% | |
| Mixed Waste B | | | | | | |
| | | | Cost per household -- \$66.00 | | Cost per household -- \$66.00 | |
| | | | Percent -- 6.3% | | Percent -- 6.3% | |
| | | | | | | Existing, committed, direct cost A and |

Municipality: YORK REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|---|-----------|--------|---|--------------------------------------|---|---|
| Potential for Impact on the Debt Burden of the municipality | | | | | | expanded blue box --low effect wet/dry, D/C B -- medium effect, mixed waste -- high |
| Amount of Debenture debt | | | | | | |
| Existing | | | Existing debt -- \$39.2 million | See impact on Provincial Treasury | | |
| | | | Debt related to diversion -- \$0 | | Debt related to diversion -- \$0 | |
| | | | Percent -- 0% | | Percent -- 0% | |
| Existing Committed | | | Debt related to diversion -- \$2.8 million | | Debt related to diversion -- \$2.8 million | |
| | | | Percent -- 7.1% | | Percent -- 7.1% | |
| Direct Cost A & B | | | Debt related to diversion -- \$2.8 million | | Debt related to diversion -- \$2.8 million | |

SYSTEM NET EFFECTS TABLE

Y-6

Municipality: YORK REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|-------------------|-----------|--------|--|----------------------------|--|---|
| Expanded Blue Box | | | Percent -- 7.1% | | Percent -- 7.1% | |
| | | | Debt related to diversion -- \$10.0 million | | Debt related to diversion -- \$10.0 million | |
| | | | Percent -- 25.5% | | Percent -- 25.5% | |
| Wet/Dry | | | Debt related to diversion -- \$45.0 million | | Debt related to -- \$45.0 million | |
| | | | Percent -- 114.8% | | Percent -- 114.8% | |
| Mixed Waste A | | | Debt related to diversion -- \$57.8 million | | Debt related to diversion -- \$57.8 million | |
| | | | Percent -- 147.4% | | Percent -- 147.4% | |
| Mixed Waste B | | | Debt related to diversion -- \$57.8 million | | Debt related to diversion -- \$57.8 million | |
| | | | Percent -- 147.4% | | Percent -- 147.4% | |
| | | | | | | Existing no effect. Committed, dir cost and expanded blue box nominal effect |

SYSTEM NET EFFECTS TABLE

Municipality: YORK REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|

Wet/dry and mixed waste high impact.

Annual debt payments as a percent of expenditures (OMB/MMA guideline)

| | | | | | | |
|--------------------|---|--|--|--|---------------------------|--|
| Existing | Existing Debt Charges -- \$9.2 million | | | | | |
| | Existing Operating Expenditure -- \$438.0 million | | | | | |
| | Existing Debt Charges as a % of Exp'ds -- 2.1% | | | | | |
| | Diversion Debt Charges -- \$0 | | | | Debt Charges -- \$0 | |
| | Percent -- 0% | | | | Percent -- 0% | |
| Existing Committed | Diversion Debt Charges -- \$434,000 | | | | Debt Charges -- \$434,000 | |
| | Percent -- 0.1% | | | | Percent -- 0.1% | |

Municipality: YORK REGION

| Criteria | Indicator | Municipal Finance System Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-------------------|--|----------------------------|--------------------------------|---|
| | Direct Cost A & B | | | | |
| | | Diversion Debt Charges -- \$434,000 | | Debt Charges -- \$434,000 | |
| | | Percent -- 0.1% | | Percent -- 0.1% | |
| | Expanded Blue Box | | | | |
| | | Diversion Debt Charges -- \$1,558,000 | | Debt Charges -- \$1,558,000 | |
| | | Percent -- 0.3% | | Percent -- 0.3% | |
| | Wet/Dry | | | | |
| | | Diversion Debt Charges -- \$7,012,000 | | Debt Charges -- \$7,012,000 | |
| | | Percent -- 1.6% | | Percent -- 1.6% | |
| | Mixed Waste A | | | | |
| | | Diversion Debt Charges -- \$9,004,000 | | Debt Charges -- \$9,004,000 | |
| | | Percent -- 2.1% | | Percent -- 2.1% | |
| | Mixed Waste B | | | | |

Municipality: YORK REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|--------------------------|----------------------------|--------------------|--------------------------------|
|----------|-----------|--------|--------------------------|----------------------------|--------------------|--------------------------------|

| | | | | | | |
|---|----------|--|---|--|--|--|
| Available debt capacity (OMB/MMA guideline) | Existing | | Diversion Debt Charges -- \$9,004,000 | | Debt Charges -- \$9,004,000 | Existing no effect. Committed, dir cost and expanded blue box nominal to moderate effect. Wet/dry and mixed waste high impact. |
| | | | Percent --2.1% | | Percent --2.1% | |
| | | | Existing Debt Capacity -- \$302 million | | | |
| | | | Debt Related to Diversion -- \$0 | | Debt Related to Diversion --\$0 | |
| Existing Committed | | | Percent of capacity -- 0% | | Percent of capacity -- 0% | |
| | | | Debt Related to Diversion -- \$2.8 million | | Debt Related to Diversion --\$2.8 million | |
| | | | | | | |
| | | | Percent of capacity -- 0.9% | | Percent of capacity -- 0.9% | |

SYSTEM NET EFFECTS TABLE

Y-10

Municipality: YORK REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|

Direct Cost A & B

| | | |
|---|---|--|
| Debt Related to Diversion -- \$2.8 million | Debt related to Diversion -- \$2.8 million | |
| Percent of capacity -- 0.9% | Percent of capacity -- 0.9% | |

Expanded Blue Box

| | | |
|--|--|--|
| Debt Related to Diversion -- \$10.0 million | Debt Related to Diversion -- \$10.0 million | |
| Percent of capacity -- 3.3% | Percent of capacity --3.3% | |

Wet/Dry

| | | |
|--|--|--|
| Debt Related to Diversion -- \$45.0 million | Debt Related to Diversion -- \$45.0 million | |
| Percent of capacity -- 14.9% | Percent of capacity --14.9% | |

Mixed Waste A

| | | |
|--|--|--|
| Debt Related to Diversion -- \$57.8 million | Debt Related to Diversion -- \$57.8 million | |
|--|--|--|

SYSTEM NET EFFECTS TABLE

Municipality: YORK REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|

| | | | | | | |
|--|--|---------------|---|--|---|--|
| | | | Percent of capacity -- 19.2% | | Percent of capacity -- 19.2% | |
| | | Mixed Waste B | | | | |
| | | | Debt Related to Diversion -- \$57.8 million | | Debt Related to Diversion -- \$57.8 million | |
| | | | Percent of capacity --19.2% | | Percent of capacity --19.2% | Existing no effect Committed, dir cost and expanded blue box nominal to moderate effect Wet/dry and mixed waste high impact. |

Potential for Impact on Municipal Reserve Funds

Total amount of reserve funds

Municipality: YORK REGION

| Criteria Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|--------------------|--|----------------------------------|------------------------|--------------------|--------------------------------|
| Existing | Existing reserves & reserve funds -- \$286 million | NOT AFFECTED BY DIVERSION | | | |
| | Existing Committed | NOT AFFECTED BY DIVERSION | | | |
| | Direct Cost A | NOT AFFECTED BY DIVERSION | | | |
| | Direct Cost B | \$6.5 million additional -- 2.3% | | | |
| | Expanded Blue Box | NOT AFFECTED BY DIVERSION | | | |
| Wet/Dry | | NOT AFFECTED BY DIVERSION | | | |
| Mixed Waste A | | NOT AFFECTED BY DIVERSION | | | |

SYSTEM NET EFFECTS TABLE

Municipality: YORK REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|

Mixed Waste B

NOT AFFECTED BY DIVERSION

Criteria not affected by diversion except for direct cost B

Reserves per household

Existing

Existing reserves per household -- \$1,919

NOT AFFECTED BY DIVERSION

Existing Committed

NOT AFFECTED BY DIVERSION

Direct Cost A

NOT AFFECTED BY DIVERSION

Direct Cost B

\$43.00 per household

SYSTEM NET EFFECTS TABLE

Y-14

Municipality: YORK REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|--|-----------|---------------------------------------|-----------------------------|----------------------------|--------------------|--------------------------------------|
| Reserves as a Percent of Expenditures | Existing | Expanded Blue Box | NOT AFFECTED BY DIVERSION | | | |
| | | Wet/Dry | NOT AFFECTED BY DIVERSION | | | |
| | | Mixed Waste A | NOT AFFECTED BY DIVERSION | | | |
| | | Mixed Waste B | NOT AFFECTED BY DIVERSION | | | |
| Existing Committed | | Reserves equal 65% of expenditures | NOT AFFECTED BY DIVERSION | | | |
| | | Direct Cost A | NOT AFFECTED BY DIVERSION | | | |

SYSTEM NET EFFECTS TABLE

Y-15

Municipality: YORK REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|

Direct Cost B
1.5% of expenditures

Expanded Blue Box

NOT AFFECTED BY DIVERSION

Wet/Dry

NOT AFFECTED BY DIVERSION

Mixed Waste A

NOT AFFECTED BY DIVERSION

Mixed Waste B

NOT AFFECTED BY DIVERSION

Criteria not affected by diversion except for direct cost

Potential for Impact on the level of municipal service

Total municipal wages, salaries, materials & contract expenditures per household

SYSTEM NET EFFECTS TABLE

Y-16

Municipality: YORK REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------------------|--|----------------------------|--------------------|--------------------------------|
| | | Existing | Operating expenditures equal \$2,940 per household | | | |
| | | | SERVICE LEVELS | | | |
| | | | NOT AFFECTED BY DIVERSION | | | |
| | | Existing Committed | | | | |
| | | | SERVICE LEVELS | | | |
| | | | NOT AFFECTED BY DIVERSION | | | |
| | | Direct Cost A & B | | | | |
| | | | SERVICE LEVELS | | | |
| | | | NOT AFFECTED BY DIVERSION | | | |
| | | Expanded Blue Box | | | | |
| | | | SERVICE LEVELS | | | |
| | | | NOT AFFECTED BY DIVERSION | | | |
| | | Wet/Dry | | | | |
| | | | SERVICE LEVELS | | | |
| | | | NOT AFFECTED BY DIVERSION | | | |

Mixed Waste A

SYSTEM NET EFFECTS TABLE

Municipality: YORK REGION

Criteria Indicator System Municipal Finance Effect Mitigation/ Enhancement System Net Effects System Net Effects by Criteria

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Mixed Waste B

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Criteria not affected by
diversion

Current expenditures
by department per
household

Existing

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Existing Committed

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Direct Cost A & B

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

SYSTEM NET EFFECTS TABLE

Y-18

Municipality: YORK REGION

| Criteria Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|-----------------------|-------------------|---|----------------------------|--------------------|---------------------------------------|
| | Expanded Blue Box | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | Wet/Dry | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | Mixed Waste A | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | Mixed Waste B | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | Criteria not affected by diversion |

Potential for
Impact on the
Provincial
Treasury

Municipality: YORK REGION

Criteria

Indicator
SystemMunicipal Finance
EffectMitigation/
Enhancement

System Net Effects

System
Net Effects
by CriteriaAmount of Provincial
funding

Pending funding arrangements/
negotiations, the analysis was
done in the absence of mitigation.
However, a potential level of Provincial
funding may approach 30% of capital costs.

Pending funding
arrangements

Potential for
Impact on
Private
Sector
Industries

Amount of private
sector funding

Existing

NOT AFFECTED BY DIVERSION

Existing Committed

NOT AFFECTED BY DIVERSION

Direct Cost A & B

NOT AFFECTED BY DIVERSION

Expanded Blue Box

NOT AFFECTED BY DIVERSION

SYSTEM NET EFFECTS TABLE

Y-20

Municipality: YORK REGION

Criteria

Indicator
SystemMunicipal Finance
EffectMitigation/
Enhancement

System Net Effects

System
Net Effects
by Criteria

Wet/Dry NOT AFFECTED BY DIVERSION

Mixed Waste A NOT AFFECTED BY DIVERSION

Mixed Waste B NOT AFFECTED BY DIVERSION

Amount of private
sector costs

Existing NOT AFFECTED BY DIVERSION

Existing Committed NOT AFFECTED BY DIVERSION

Direct Cost A & B NOT AFFECTED BY DIVERSION

Expanded Blue Box NOT AFFECTED BY DIVERSION

Wet/Dry NOT AFFECTED BY DIVERSION

Mixed Waste A NOT AFFECTED BY DIVERSION

Mixed Waste B NOT AFFECTED BY DIVERSION

SYSTEM NET EFFECTS TABLE

Y-21

Municipality: YORK REGION

| Criteria | Indicator | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------------------------|----------------------------|--------------------|--------------------------------------|
|----------|-----------|--------------------------|----------------------------|--------------------|--------------------------------------|

Amount of costs
passed on through
higher prices

Existing NOT AFFECTED BY DIVERSION

Existing Committed NOT AFFECTED BY DIVERSION

Direct Cost A & B NOT AFFECTED BY DIVERSION

Expanded Blue Box NOT AFFECTED BY DIVERSION

Wet/Dry NOT AFFECTED BY DIVERSION

Mixed Waste A NOT AFFECTED BY DIVERSION

Mixed Waste B NOT AFFECTED BY DIVERSION

Amount of private
sector costs
financed through

SYSTEM NET EFFECTS TABLE

Municipality: YORK REGION

| Criteria Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|-----------------------|---------------------------------------|--|----------------------------|--|--------------------------------------|
| | taxes, incentives, economics, etc. | | | | |
| | Existing | Total municipal taxes paid by the commercial/ industrial sector -- \$61.3 million | | | |
| | | Taxes Related to Diversion -- \$668,000 | | Taxes Related to Diversion -- \$668,000 | |
| | | Percent -- 1.1% | | Percent -- 1.1% | |
| | Existing Committed | | | | |
| | | Taxes Related to Diversion -- \$798,000 | | Taxes Related to Diversion -- \$798,000 | |
| | | Percent -- 1.3% | | Percent -- 1.3% | |
| | Direct Cost A & B | | | | |
| | | Taxes Related to Diversion -- \$784,000 | | Taxes Related to Diversion -- \$784,000 | |
| | | Percent -- 1.3% | | Percent -- 1.3% | |
| | Expanded Blue Box | | | | |
| | | Taxes Related to Diversion | | Taxes Related to Diversion | |

Municipality: YORK REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|---|
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|---|

Wet/Dry

-- \$1,324,000
Percent -- 2.1%

Percent -- 2.1%

Taxes Related to Diversion
-- \$4,803,000
Percent -- 5.9%

Taxes Related to Diversion
-- \$4,803,000
Percent -- 5.9%

Mixed Waste A

Taxes Related to Diversion
-- \$7,080,000
Percent -- 11.5%

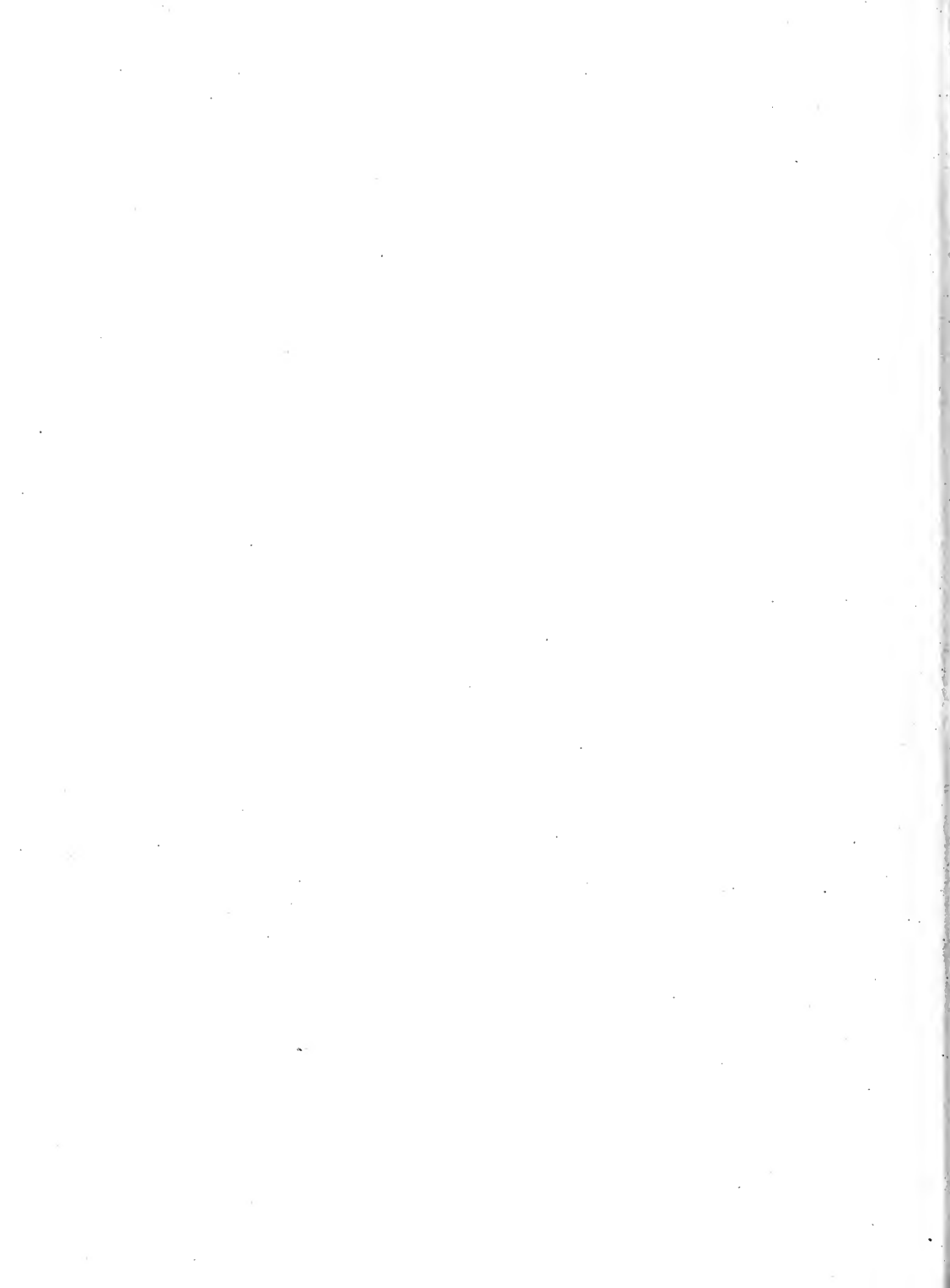
Taxes Related to Diversion
-- \$7,080,000
Percent -- 11.5%

Mixed Waste B

Taxes Related to Diversion
-- \$6,010,000
Percent -- 9.7%

Taxes Related to Diversion
-- \$6,010,000
Percent -- 9.7%

Existing, committed,
direct cost and
expanded
blue box -- low effect.
Wet/dry --medium,
mixed waste
high effect.



REGION OF PEEL



Municipality: PEEL REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|

Potential for Impact on Local Taxpayers

Total increase in the net general municipal levy

Total Municipal Taxation -- \$335 million

See Impact on Provincial Treasury

Existing

Annual Cost -- \$3,568,006

Annual Cost -- \$3,568,006

Percent -- 1.1%

Percent -- 1.1%

Existing Committed

Annual Cost -- \$16,723,812

Annual Cost -- \$16,723,812

Percent -- 5.0%

Percent -- 5.0%

Direct Cost A

Annual Cost -- \$18,589,217

Annual Cost -- \$18,589,217

Percent -- 5.5%

Percent -- 5.5%

Direct Cost B

Annual Cost -- \$28,589,217

Annual Cost -- \$28,589,217

Percent -- 8.4%

Percent -- 8.4%

Expanded Blue Box

Annual Cost -- \$18,817,032

Annual Cost -- \$18,817,032

SYSTEM NET EFFECTS TABLE

Municipality: PEEL REGION

Criteria
Indicator
SystemMunicipal Finance
EffectMitigation/
Enhancement

System Net Effects

System
Net Effects
by
Criteria

Percent -- 5.6%

Percent -- 5.6%

Wet Dry

Annual Cost
-- \$17,943,844Annual Cost
-- \$17,943,844

Percent -- 4.3%

Percent -- 4.3%

Mixed Waste A Annual Cost

-- \$29,128,318

Annual Cost
-- \$29,128,318

Percent -- 5.4%

Percent -- 5.4%

Mixed Waste B Annual Cost

-- \$24,299,399

Annual Cost
-- \$24,299,399

Percent -- 7.3%

Percent -- 7.3%

Existing, committed
dir cost A and
expanded
blue box -- low impact.
Wet/dry & mixed waste
-- medium impact
Dir Cost B -- HighNet general municipal
levy, adjusted for
commercial/industrial
property assessment,
expressed on a per
household basis.

SYSTEM NET EFFECTS TABLE

Municipality: PEEL REGION

| Criteria Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|--------------------|--------|--------------------------|-------------------------|--------------------|--------------------------------|
|--------------------|--------|--------------------------|-------------------------|--------------------|--------------------------------|

Existing

Municipal taxation per household -- \$943
Cost per household -- \$8.00
Percent -- 0.8%

Municipal taxation per household --\$943
Cost per household -- \$8.00
Percent --0.8%

Existing Committed

Cost per household -- \$28.00
Percent -- 3.0%

Cost per household -- \$28.00
Percent --3.0%

Direct Cost A

Cost per household -- \$31.00
Percent -- 3.3%

Cost per household -- \$31.00
Percent -- 3.3%

Direct Cost B

Cost per household -- \$46.00
Percent -- 4.8%

Cost per household -- \$46.00
Percent -- 4.8%

SYSTEM NET EFFECTS TABLE

Municipality: PEEL REGION

| Criteria Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|--------------------|--------|-------------------------------|------------------------|-------------------------------|--------------------------------|
| Expanded Blue Box | | | | | |
| | | Cost per household -- \$31.00 | | Cost per household -- \$31.00 | |
| | | Percent -- 3.3% | | Percent -- 3.3% | |
| Wet/Dry | | | | | |
| | | Cost per household -- \$30.00 | | Cost per household -- \$30.00 | |
| | | Percent -- 3.2% | | Percent -- 3.2% | |
| Mixed Waste A | | | | | |
| | | Cost per household -- \$47.00 | | Cost per household -- \$47.00 | |
| | | Percent -- 5.0% | | Percent -- 5.0% | |
| Mixed Waste B | | | | | |
| | | Cost per household -- \$40.00 | | Cost per household -- \$40.00 | |
| | | Percent -- 4.2% | | Percent -- 4.2% | |

Municipality: PEEL REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|---|--------------------|--------|--|--------------------------------------|--|--|
| Potential for Impact on the Debt Burden of the municipality | | | | | | Existing system -- low effect. All other systems medium |
| Amount of Debenture debt | | | | | | |
| | Existing | | Existing debt -- \$107.8 million Debt related to diversion -- \$0 Percent -- 0% | See impact on Provincial Treasury | Debt related to diversion -- \$0 Percent -- 0% | |
| | Existing Committed | | Debt related to diversion -- \$90.3 million Percent -- 83.8% | | Debt related to diversion -- \$90.3 million Percent -- 83.8% | |
| | Direct Cost A & B | | Debt related to diversion -- \$90.3 million Percent -- 83.8% | | Debt related to diversion -- \$90.3 million Percent -- 83.8% | |

SYSTEM NET EFFECTS TABLE

Municipality: PEEL REGION

| Criteria Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|---|--------|---|----------------------------|---|--|
| Expanded Blue Box | | | | | |
| | | Debt related to diversion -- \$90.3 million | | Debt related to diversion -- \$90.3 million | |
| | | Percent -- 83.8% | | Percent -- 83.8% | |
| Wet/Dry | | | | | |
| | | Debt related to diversion -- \$90.3 million | | Debt related to -- \$90.3 million | |
| | | Percent -- 83.8% | | Percent -- 83.8% | |
| Mixed Waste A | | | | | |
| | | Debt related to diversion -- \$91.0 million | | Debt related to diversion -- \$91.0 million | |
| | | Percent -- 84.4% | | Percent -- 84.4% | |
| Mixed Waste B | | | | | |
| | | Debt related to diversion -- \$105.0 million | | Debt related to diversion -- \$105.0 million | |
| | | Percent -- 97.4% | | Percent -- 97.4% | |
| Annual debt payments as a percent of | | | | | Existing no effect. All other systems high impact. |

Municipality: PEEL REGION

| Criteria | Indicator | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|-----------------------------|----------------------------|--------------------|--------------------------------------|
|----------|-----------|-----------------------------|----------------------------|--------------------|--------------------------------------|

expenditures (OMB/
MMA guideline)

Existing

Existing Debt Charges
-- \$38.9 million

Existing Operating Expenditure
-- \$754.2 million

Existing Debt Charges as a % of Exp'ds
-- 5.2%

Diversion Debt Charges
-- \$0

Percent -- 0%

Debt Charges
-- \$0

Percent -- 0%

Existing Committed

Diversion Debt Charges
-- \$14,071,000

Percent -- 1.9%

Debt Charges
-- \$14,071,000

Percent -- 1.9%

Direct Cost A & B

Diversion Debt Charges
-- \$14,071,000

Percent -- 1.9%

Debt Charges
-- \$14,071,000

Percent -- 1.9%

SYSTEM NET EFFECTS TABLE

P-8

Municipality: PEEL REGION

| Criteria Indicator System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|---------------------------|---|------------------------|---------------------------------|--|
| Expanded Blue Box | | | | |
| | Diversion Debt Charges -- \$14,071,000 | | Debt Charges -- \$14,701,000 | |
| | Percent -- 1.9% | | Percent -- 1.9% | |
| Wet/Dry | | | | |
| | Diversion Debt Charges -- \$14,066,000 | | Debt Charges -- \$14,066,000 | |
| | Percent -- 1.9% | | Percent -- 1.9% | |
| Mixed Waste A | | | | |
| | Diversion Debt Charges -- \$14,180,000 | | Debt Charges -- \$14,180,000 | |
| | Percent -- 1.9% | | Percent -- 1.9% | |
| Mixed Waste B | | | | |
| | Diversion Debt Charges -- \$16,361,000 | | Debt Charges -- \$16,361,000 | |
| | Percent -- 2.2% | | Percent -- 2.2% | |
| | | | | Existing no effect. all other systems medium impact. |

SYSTEM NET EFFECTS TABLE

Municipality: PEEL REGION

| Criteria Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|--------------------|--------|--------------------------|------------------------|--------------------|--------------------------------|
|--------------------|--------|--------------------------|------------------------|--------------------|--------------------------------|

Available debt capacity
(OMB/MMA guideline)

Existing

Existing Debt Capacity
-- \$479 million

Debt Related to Diversion
-- \$0

Debt Related to Diversion
-- \$0

Percent of capacity -- 0%

Percent of capacity -- 0%

Existing Committed

Debt Related to Diversion
-- \$90.3 million

Debt Related to Diversion
-\$90.3 million

Percent of capacity -- 18.9%

Percent of capacity -- 18.9%

Direct Cost A & B

Debt Related to Diversion
-- \$90.3 million

Debt related to Diversion
-- \$90.3 million

Percent of capacity -- 18.9%

Percent of capacity -- 18.9%

Expanded Blue Box

SYSTEM NET EFFECTS TABLE

Municipality: PEEL REGION

| Criteria | Indicator | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|---------------|-----------|---|----------------------------|---|--------------------------------------|
| Wet/Dry | | Debt Related to Diversion -- \$90.3 million | | Debt Related to Diversion -- \$90.3 million | |
| | | Percent of capacity -- 18.9% | | Percent of capacity --18.9% | |
| | | Debt Related to Diversion -- \$90.3 million | | Debt Related to Diversion -- \$90.3 million | |
| | | Percent of capacity -- 18.9% | | Percent of capacity --18.9% | |
| | | Debt Related to Diversion -- \$91.0 million | | Debt Related to Diversion -- \$91.0 million | |
| | | Percent of capacity -- 19.0% | | Percent of capacity -- 19.0% | |
| Mixed Waste A | | Debt Related to Diversion -- \$105.0 million | | Debt Related to Diversion -- \$105.0 million | |
| | | Percent of capacity --21.9% | | Percent of capacity --21.9% | |
| Mixed Waste B | | Debt Related to Diversion -- \$90.3 million | | Debt Related to Diversion -- \$90.3 million | |
| | | Percent of capacity -- 18.9% | | Percent of capacity --18.9% | |

Existing no effect.
All other systems
medium impact.

Municipality: PEEL REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|

Potential for
Impact on
Municipal
Reserve Funds

Total amount of
reserve funds

Existing

Existing reserves &
reserve funds -- \$640 million

NOT AFFECTED BY DIVERSION

Existing Committed

NOT AFFECTED BY DIVERSION

Direct Cost A

NOT AFFECTED BY DIVERSION

Direct Cost B

\$10 million added
-- 1.5 % added

Expanded Blue Box

Municipality: PEEL REGION

| Criteria Indicator System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|---------------------------|----------------------------------|-------------------------|----------------------------------|---|
| NOT AFFECTED BY DIVERSION | | | | |
| Wet/Dry | Reserves reduced by \$10 million | | Reserves reduced by \$10 million | |
| | Percent -- 1.5% | | Percent -- 1.5% | |
| Mixed Waste A | Reserves reduced by \$39 million | | Reserves reduced by \$39 million | |
| | Percent -- 6.1% | | Percent -- 6.1% | |
| Mixed Waste B | Reserves reduced by \$45 million | | Reserves reduced by \$45 million | |
| | Percent -- 7.0% | | Percent -- 7.0% | Existing, committed and expanded blue box -- no effect. Wet/dry and mixed waste nominal to moderate effect. Direct cost B nominal positive. |

Municipality: PEEL REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|

Reserves per household

Existing
Existing reserves per household -- \$2,857
NOT AFFECTED BY DIVERSION

Existing Committed

NOT AFFECTED BY DIVERSION

Direct Cost A

NOT AFFECTED BY DIVERSION

Direct Cost B

\$43.67 added per household
-- 1.5%

Expanded Blue Box

NOT AFFECTED BY DIVERSION

Wet/Dry

Reserves reduced by \$44 per household
Percent -- 1.5%
Reserves reduced by \$44 per household
Percent -- 1.5%

SYSTEM NET EFFECTS TABLE

Municipality: PEEL REGION

Criteria
Indicator
SystemMunicipal Finance
EffectMitigation/
Enhancement

System Net Effects

System
Net Effects
by Criteria

Mixed Waste A

Reserves reduced by \$174 per household
Percent -- 6.1%

Reserves reduced by \$174 per household
Percent -- 6.1%

Mixed Waste B

Reserves reduced by \$201 per household
Percent -- 7.0%

Reserves reduced by \$201 per household
Percent -- 7.0%

Existing, committed
and expanded blue box
-- no effect.
Wet/dry and mixed
waste moderate
effect.
Direct Cost B positive

Reserves as a Percent
of Expenditures

Existing

Reserves equal 42% of
expenditures

NOT AFFECTED BY DIVERSION

Existing Committed

NOT AFFECTED BY DIVERSION

SYSTEM NET EFFECTS TABLE

P-15

Municipality: PEEL REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|--------------------------|-------------------------|--------------------|--------------------------------|
|----------|-----------|--------|--------------------------|-------------------------|--------------------|--------------------------------|

Direct Cost A

NOT AFFECTED BY DIVERSION

Direct Cost B

Reserves added by 40.4% of expenditure

Reserves added by 40.4% of expenditure

Expanded Blue Box

NOT AFFECTED BY DIVERSION

Wet/Dry

Reserves reduced to 40.4% of expenditure

Reserves reduced to 40.4% of expenditure

Mixed Waste A

Reserves reduced to 35.9% of expenditure

Reserves reduced to 35.9% of expenditure

Mixed Waste B

Reserves reduced to 35.0% of expenditure

Reserves reduced to 35.0% of expenditure

Existing, committed, direct cost A and expanded blue box -- no effect.
Wet/dry and mixed waste & Dir Cost B -- moderate effect.

SYSTEM NET EFFECTS TABLE

P-16

Municipality: PEEL REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|

Potential for
Impact on the
level of
municipal
service

Total municipal wages,
salaries, materials &
contract expenditures
per household

Existing

Operating expenditures
equal \$3,290 per
household

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Existing Committed

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Direct Cost A & B

SERVICE LEVELS
NOT AFFECTED BY DIVERSION

Expanded Blue Box

SYSTEM NET EFFECTS TABLE

Municipality: PEEL REGION

| Criteria Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|--|--------|---|------------------------|--------------------|------------------------------------|
| Wet/Dry | | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| Mixed Waste A | | | | | |
| | | | | | |
| Mixed Waste B | | | | | |
| | | | | | |
| Current expenditures by department per household | | | | | |
| | | | | | |
| Existing | | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | | | | | Criteria not affected by diversion |

SYSTEM NET EFFECTS TABLE

Municipality: PEEL REGION

| Criteria | Indicator | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|--------------------|---|----------------------------|--------------------|--------------------------------------|
| | Existing Committed | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | Direct Cost A & B | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | Expanded Blue Box | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | Wet/Dry | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | Mixed Waste A | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |
| | Mixed Waste B | SERVICE LEVELS NOT AFFECTED BY DIVERSION | | | |

Municipality: PEEL REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|
|----------|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|

Potential for Impact on the Provincial Treasury

Amount of Provincial funding

Pending funding arrangements/ negotiations, the analysis was done in the absence of mitigation. However, a potential level of Provincial funding may approach 30% of capital costs.

Criteria not affected by diversion

Pending funding arrangements

Potential for Impact on Private Sector Industries

Amount of private sector funding

SYSTEM NET EFFECTS TABLE

Municipality: PEEL REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--------------------------------------|
| | | | | | | |

Existing NOT AFFECTED BY DIVERSION

Existing Committed NOT AFFECTED BY DIVERSION

Direct Cost A & B NOT AFFECTED BY DIVERSION

Expanded Blue Box NOT AFFECTED BY DIVERSION

Wet/Dry NOT AFFECTED BY DIVERSION

Mixed Waste A NOT AFFECTED BY DIVERSION

Mixed Waste B NOT AFFECTED BY DIVERSION

Amount of private
sector costs

Existing NOT AFFECTED BY DIVERSION

Existing Committed NOT AFFECTED BY DIVERSION

Direct Cost A & B NOT AFFECTED BY DIVERSION

SYSTEM NET EFFECTS TABLE

Municipality: PEEL REGION

Criteria

| Indicator | System | Municipal Finance Effect | Mitigation/Enhancement | System Net Effects | System Net Effects by Criteria |
|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|
|-----------|--------|--------------------------|------------------------|--------------------|--------------------------------|

Expanded Blue Box NOT AFFECTED BY DIVERSION

Wet/Dry NOT AFFECTED BY DIVERSION

Mixed Waste A NOT AFFECTED BY DIVERSION

Mixed Waste B NOT AFFECTED BY DIVERSION

Amount of costs passed on through higher prices

Existing NOT AFFECTED BY DIVERSION

Existing Committed NOT AFFECTED BY DIVERSION

Direct Cost A & B NOT AFFECTED BY DIVERSION

Expanded Blue Box NOT AFFECTED BY DIVERSION

Wet/Dry NOT AFFECTED BY DIVERSION

Mixed Waste A NOT AFFECTED BY DIVERSION

SYSTEM NET EFFECTS TABLE

Municipality: PEEL REGION

| Criteria | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------------------------|----------------------------|--------------------|--------------------------------------|
|----------|-----------------------------|----------------------------|--------------------|--------------------------------------|

Mixed Waste B

NOT AFFECTED BY DIVERSION

Amount of private
sector costs
financed through
taxes, incentives,
economics, etc.

Existing

Total municipal taxes
paid by the commercial/
industrial sector
-- \$124.8 million

Taxes Related to
Diversion
-- \$1.7 million
Percent -- 1.4%

Taxes Related to Diversion
-- \$1.7 million
Percent -- 1.4%

Existing Committed

Taxes Related to Diversion
-- \$8,200,000
Percent -- 6.5%

Taxes Related to Diversion
-- \$8,200,000
Percent -- 6.5%

Municipality: PEEL REGION

| Criteria | Indicator | Municipal Finance System | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|-------------------|-------------------|---|----------------------------|---|--------------------------------------|
| Direct Cost A & B | | Taxes Related to Diversion -- \$9,100,000 | | Taxes Related to Diversion -- \$9,100,000 | |
| | | Percent -- 7.3% | | Percent -- 7.3% | |
| | Expanded Blue Box | | | | |
| Wet/Dry | | Taxes Related to Diversion -- \$9,200,000 | | Taxes Related to Diversion -- \$9,200,000 | |
| | | Percent -- 7.3% | | Percent -- 7.3% | |
| | | | | | |
| Mixed Waste A | | Taxes Related to Diversion -- \$8,800,000 | | Taxes Related to Diversion -- \$8,800,000 | |
| | | Percent -- 7.1% | | Percent -- 7.1% | |
| | | | | | |
| Mixed Waste B | | Taxes Related to Diversion -- \$14,300,000 | | Taxes Related to Diversion -- \$14,300,000 | |
| | | Percent -- 11.4% | | Percent -- 11.4% | |
| | | Taxes Related to Diversion -- \$11,900,000 | | Taxes Related to Diversion -- \$11,900,000 | |

SYSTEM NET EFFECTS TABLE

Municipality: PEEL REGION

| Criteria | Indicator | System | Municipal Finance Effect | Mitigation/ Enhancement | System Net Effects | System Net Effects by Criteria |
|----------|-----------|--------|-----------------------------|----------------------------|--------------------|--|
| | | | Percent -- 9.5% | | Percent -- 9.5% | Existing -- low effect. All others -- high effect. |

SCHEDULE E:
EXISTING SYSTEM
COST RECONCILITATION

EXISTING SYSTEM COST RECONCILIATION

The following table presents a reconciliation of the existing system costs for waste management used in Resource Integration Systems' technical appendix to costs utilized by Future Urban Research in this technical appendix. The purpose of the reconciliation is to demonstrate that both FUR and RIS are using the same system costs in their analysis but often the costs are described or termed in a manner consistent with practices specific to each discipline. The table demonstrates how the costs used by both consultant teams relate to each other.

The existing system costs utilized by Future Urban Research were derived from the 1992 operating budgets from each of the GTA municipalities and therefore are the costs that have to be reconciled to. It should be noted that it is possible to reconcile all the system costs developed in this technical appendix however the following table presents only the existing system. Other systems would follow a similar approach.

The table starts with the total system costs for waste management as per RIS's technical appendix. This system cost includes both waste diversion and disposal costs, but does not include overhead costs. Costs associated with solid or landfill waste are then removed from RIS figures to get net diversion costs. Overhead costs associated with diversion are then added to the RIS figures to arrive at the total net cost of diversion as per the 1992 operating budgets. Any savings that occur as a result of diverting waste rather than landfilling are then subtracted to arrive at the net annual levy. To arrive at the costs that the residents are actually taxed the commercial portion of property taxes is then removed. The resulting cost represents the residential portion for waste diversion, which FUR has expressed as a per household cost. This per household cost is used then to drive the effects analysis.

RECONCILIATION OF SYSTEM COSTS

| | YORK REGION COSTS (\$) | RIS COST/ HSHLD | FUR COST/ HSHLD | METRO REGION COSTS (\$) | RIS COST/ HSHLD | FUR COST/ HSHLD | PEEL REGION COSTS (\$) | RIS COST/ HSHLD | FUR COST/ HSHLD | DURHAM REGION COSTS (\$) | RIS COST/ HSHLD | FUR COST/ HSHLD |
|------------------------------------|---------------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|-----------------------------|-----------------------|-----------------------|
| # HOUSEHOLDS | | 161556 | 150485 | | 871880 | 864555 | | 240228 | 229670 | | 147105 | 136135 |
| RIS SYSTEM COST | 20,664,606 | 128 | 137 | 114,524,074 | 131 | 132 | 42,114,066 | 175 | 183 | 20,555,515 | 140 | 151 |
| LESS. LANDFILL DISPOSAL COST | (14,215,000) | (68) | (94) | (84,255,461) | (97) | (97) | (35,466,060) | (148) | (154) | (15,463,650) | (105) | (114) |
| DIVERSION COST | 6,449,606 | 40 | 43 | 30,268,613 | 35 | 35 | 6,648,006 | 28 | 29 | 5,091,865 | 35 | 37 |
| ADD. FUR OVERHEAD COST | 1,321,095 | 8 | 9 | 13,966,129 | 16 | 16 | 2,000,000 | 8 | 9 | 0 | 0 | 0 |
| NET COST AS PER BUDGETS | 7,770,701 | 48 | 52 | 44,234,742 | 51 | 51 | 8,648,006 | 36 | 38 | 5,091,865 | 35 | 37 |
| LESS. DISPOSAL SAVINGS FROM BUDGET | (5,544,000) | (34) | (37) | (20,487,605) | (23) | (24) | (5,080,000) | (21) | (22) | (2,997,000) | (20) | (22) |
| NET ANNUAL LEVY | 2,226,701 | 14 | 15 | 23,747,137 | 27 | 27 | 3,568,006 | 15 | 16 | 2,094,865 | 14 | 15 |
| LESS: COMMERCIAL PORTION % | (668,010) | (4) | (4) | (12,348,511) | (14) | (14) | (1,748,323) | (7) | (8) | (858,895) | (6) | (6) |
| | 30.00% | 30.00% | 30.00% | 52.00% | 52.00% | 52.00% | 49.00% | 49.00% | 49.00% | 41.00% | 41.00% | 41.00% |
| RESIDENTIAL COST PER PER HOUSEHOLD | 1,558,691 | 10 | 10 | 11,398,626 | 13 | 13 | 1,819,683 | 8 | 8 | 1,235,970 | 8 | 9 |

SCHEDULE F:
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[REDACTED]

SCHEDULE G:
LIST OF
PERSONS CONTACTED

[REDACTED]

List of Persons Contacted:**Region of Halton**

| | |
|--------------|--|
| Milton | D. Birkett, Director of Budgets and Finance M. Skora, Financial Analyst P. Antoniow, Engineering Department J. McQueen, Treasurer |
| Halton Hills | P. Sargeant, Recycling Co-ordinator |
| Burlington | P. Anderson, Public Works |
| Oakville | M. Jones, Solid Waste Manager |

Region of Durham

P. Richards, Budgets and Economic Planning
J. Clapp, Director of Finance

Region of Peel

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| Caledon | B. Moore, Director of Public Works M. Jones, Treasurers Office |
| Brampton | S. Steward, Operations Supervisor, Public Works |
| Mississauga | T. Long, Recycling Co-ordinator M. Masliwek, Manager Financial Services |

Region of York

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| Richmond Hill | B. Morrison, Solid Waste Manager |
| Newmarket | R. Prentice, Municipal Clerk |
| Georgina | J. Carr, Town Offices S. Armstrong, Town Offices |
| East Gwillimbury | F. Reid, Treasurer W. Hunt, Town Engineer |
| Aurora | P. Nog, Program Manager |
| Whitchurch-Stouffville | P. Whitehouse, Public Works Department |
| Vaughan | E. Simmons, Waste Management Co-ordinator Mr. Birkholder, Finance Department |
| Markham | J. Anbinder, Commission of Public Works G. Wilson, Commissioner of Finance N. Mortson, Director of Waste Management |
| King | D. Younge, Treasurer |

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| York | C. Rodrigo, Clerk E. Benedetti-Clausser, Finance Department C. Hill, Finance Department E. Nichols, Treasurer |
| East York Etobicoke Scarborough North York | L. Turner, Budgets Director |
| OMMRI | J. Hruska |
| Waste Reduction Office | J. Lee |

